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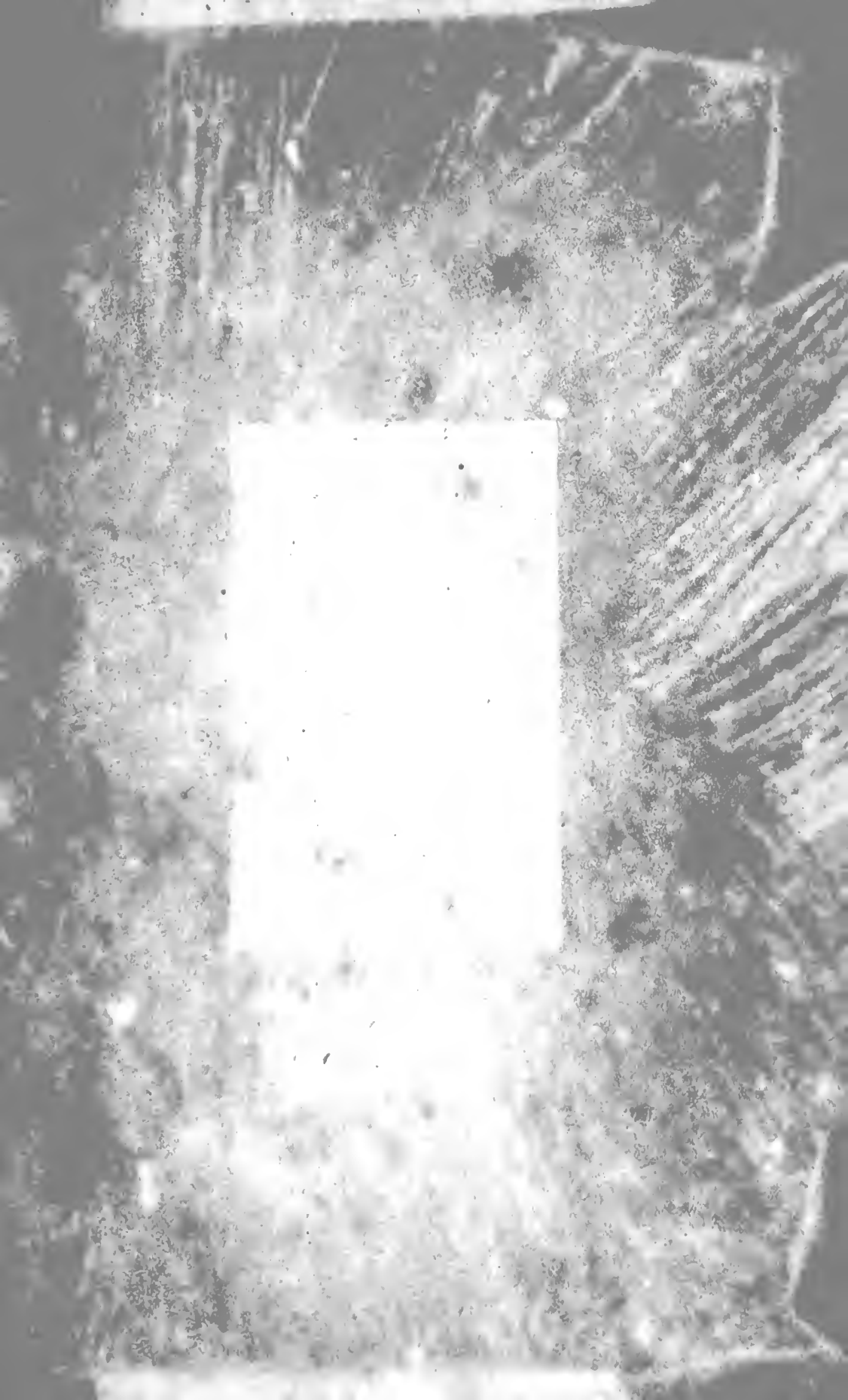
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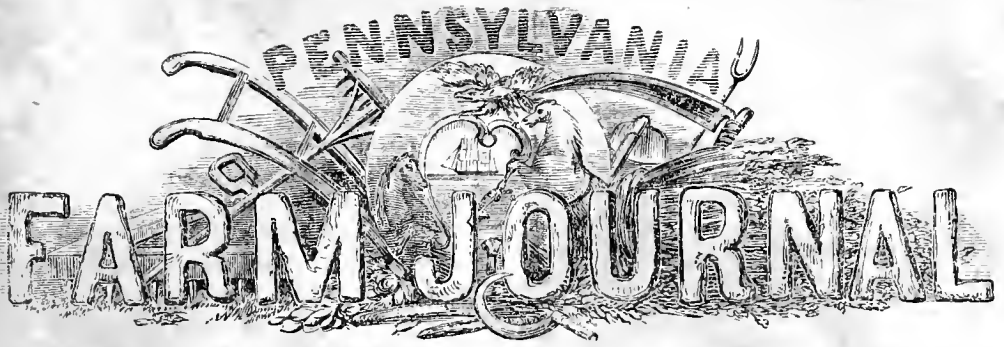
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J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

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Potter County, Pa.

For the following interesting information relative to the topography and agriculture of one of our northern counties, we are indebted to Dr. A. L. Elwyn, corresponding Secretary of our State Society. It is contained in a letter addressed to him by John M. Hamilton, Coudersport, in that county:

COUDERSPORT, Jan. 5th, 1853.

DEAR SIR:—"To do away with the impression" you refer to is a task for which I may be unequal. "Poor, rough and hilly" is a hard character for any district of country. With such an impression abroad which I know to be too prevalent, it is not astonishing that the advance of Potter county has been slow. Tioga county and McKean county, the first on the east and the latter on the west do not bear this reputation, yet a brief comparison of progress may not be amiss. All three, I think, were set off in the

same year, 1805, by our Legislature. Our neighbors possessed geographical advantages. The Tioga river became the connecting link between the Susquehanna (West Branch) and New York; settlements commenced, and in 1820 the county numbered 4021 of population. McKean had the outlet of the Allegheny with her handsome valley and the "Ischunuangwandt" to which the settlement must have been chiefly confined, judging from the population in 1820, which was 728—perhaps a portion was on the "Driftwood" branch of the Sinnamahoning, in the South East corner of the county. Potter lay between, without any important outlet, cut off from the West Branch by the timber and coal lands of Clinton, and imagined to be so difficult of access, that they complained, even in 1847, when I came to this place, that persons passing from Eastern Tioga to Smethport, would take Corning and Olean in their route. Her population in 1810 was 10 families; in 1820 they numbered 186. Until 1826 their judicial district centered at Williamport, 100 miles distant. About that time the Court was removed to Smethport, the county seat of McKean, and for ten years all their legal business was transacted there. In 1830 the population of McKean was only 1429, while that of Potter was 1265; and in 1836, I think, the first Court was held in this place. By the last census, 1850, this county numbered about 6,000, being larger than McKean, and a rapid approach toward Tioga. We have now a daily stage to the north; a semi-weekly mail to the northwest; one weekly to the northeast; to the east, to the west; and three weekly to the south; a brick Court House nearly finished, estimated to cost about \$15,000; the county only about \$4,000 in debt for loans, and in a prosperous condition.

Now for the topography: Pass a line east and west through this place, which is about 15 miles south of the State line, and you divide the county into two portions, which are entirely different, at least in reference to the shape of surface. The north half comprises the head waters of the Genessee,

Cowanesque, Pine Creek, the Oswego and other branches of the Allegheny. Of course the hills are low, equally fertile with the valleys, and the whole generally well watered. As you approach the South half, and continue through it, the hills become higher and steeper, the indentations of the valleys more decided, but exceedingly fertile, the tops of the ridges broad, and when you gain access by raising the valleys of the smaller streams, you find handsome rich lands, with hard timber, and well located for large farms. Such is the character of what I have seen, and I think a fair general representation of the whole. The principal waters of the southern portions are the North Branch of the Sinnamahoning and Kettle Creek, some of the head springs of the former being only three or four miles from this place.

Of the soil, I fear I may be charged with praising it too much, but permit me to say in advance, that when I started for this county, my *unfavorable* impressions were as strong as yours can be. I have been here about 5 years, and my business has been such as to give me a thorough knowledge of the settled portions of the county.

The business of this county is undoubtedly *grass*. That is, the making of butter and cheese, the raising of cattle and sheep, and the manufacture of wool by the numerous water powers scattered over it. We have no lime in this county; (price at this place \$1 per bushel;) of course wheat is forbidden. But grass and oats are luxuriant, and of other crops we can raise what we need if we had good farmers; but a good farmer with us is like Randolph's black swan: "*rara avis in terra.*" The average yield of oats must be over 50 bushels to the acre, and 100 bushels has been gathered from new land; that is, where the trees have been cut, burnt, the seed sown among the stumps, and scratched in with a harrow. I have seen the tall Ohio corn, on the valley of Kettle Creek, and one field was pointed out to me on the Sinnamahoning, that had been successfully planted with corn for 13 successive years, without any manure, and the yield of the last year was 25 or 30 bushels to the acre. But in the Northern part the corn crop has not been so favorable in consequence of the late frosts in the spring, which have been greatly ameliorated by the increase of clearings, and will doubtless be removed as the settlement progresses. I have seen the scarlet radish as thick as my arm below the elbow, and about a foot long; onions that one would fill a common sized saucer; parsneps and carrots to match; have eaten as good celery as I ever found in the Philadelphia market, and a farmer below us on the river, weighed the product of one of his pumpkin vines, and reported seven of 32 lbs. each, and 2 of 25 lbs. each, making an aggregate of 274 lbs. from a single vine, and I should not omit to say that potatoes were raised in this place last summer, weighing from 2 lbs. to 2½ lbs. each.

The soil is generally a rich black loam, with none of the "hard-pan" that troubled our friends of Tioga sorely; until a *farmer* taught them that deep ploughing would enable them to use it; and but little of the clay that makes the soil of a part of McKean cold and difficult to work. The timber generally upon side-hills of western and northern exposure, is hemlock, but this is not always the case, nor is it altogether confined to such localities. There is considerable hemlock in the county, also large bodies of pine which are being rapidly removed.

Upon the tops of the ridges and in the valleys of the north half, the timber is chiefly beech, maple, birch, cherry, ash, linden, golden willow, and occasionally chestnut oak and hickory. In the south part add white walnut, cucumber, white wood, locust and the chestnut. Oak and hickory become more abundant, and near the south line I think an occasional black walnut may be found. Of wild fruit we have the plum, the thorn apple, almost equal to the Siberian crab, blackberry, the white blackberry, red and yellow raspberries, strawberry, gooseberry, black currant, Mandrake or May apple. I had almost forgotten the whortleberry, and probably have overlooked some familiar fruit.

If a botanic physician should stray into this wilderness, he will find the gentian, sarsaparilla, liverwort, and a thousand other old acquaintances; while the white flowers of Shadberry and the plum, or later in the season the splendid azaleas and successions of other handsome flowers. Or if you are in the southern half of the county, the magnificent and gorgeous flowers of the elk laurel please the eye and relieve our woods from any appearance of abandonment. Our woods pasture is excellent and certain; in fact, a large majority of the settlers allow their cattle to depend entirely upon it, until driven in by the first snows of winter, without fear of their losing flesh or being in bad condition for wintering.

Our water is pure and climate healthy, the only complaint we have to make is of an annual visit by *Jack Frost* on the 12th June or thereabouts; often too slight to do any injury, but sometimes nipping the joints of the clover or cutting the corn to the ground.

If there is a reduction of temperature in the southern part of the State at that time, I never noticed it.

But if you have had the patience to wade through this medley of facts, wedged in without forethought or regularity, I must begin again. "To remove the impression," you must pay us a visit; not as the stranger comes, riding through on the State Road, laid on the *worst* land in the county; but visit our farming districts in the north half (for about three-fourths of our population is on that portion,) or visit the valley of the Sinnamahoning, and the Norwegian settlement in the south, and I think you will acknowl-

edge that "the impression" was worse than the reality.

Send us *good* farmers. The unseated lands of the county can be bought from \$3 to \$5 per acre, and in some parts of the county, for even less than \$3. Farms with more or less of clearing and improvements may be purchased from \$10 to \$20 per acre. There are no improved breeds of stock in the county. I endeavored last spring to raise a club for the purchase of an Alderney bull, of your friend, Aaron Clement, but failed. I hope to be more successful since the organization of our Society.

Very respectfully yours,

JOHN M. HAMILTON,

A. L. ELWYN, Esq.

Professor Mapes' Reply to G. Blight Browne.

We copy the following editorial from the April number of the *Working Farmer*, being a reply to a criticism of our correspondent, G. Blight Browne, in February number of *Farm Journal*, upon an analysis of soil, published in that paper.

We give it with the view of letting the public see both sides of the question, our only object being to elicit truth, and subserve the great interests it is the intent of both papers to promote. In discussions on such matters of great importance to the *farmer*, we see no advantage in using personal and offensive epithets. There is no argument, at least in *them*. We omit here some expressions of this character, which we think uncalled for. All analyses, professing to be of a scientific character, are certainly open for criticism and examination.

"With the letter to which this uncourteous writer refers before him, and with the following paragraph contained in it, our readers can form some idea of his sense of propriety.

"*You need not attempt to add the whole required quantity to your soil in one, two or three years, but by continuing the use of the amendments recommended, with a reference to the relative proportions only, you will obtain full crops, and eventually place your soil in a condition to be worked with very slight quantities of farm or other manures.*"

"Does G. Blight Browne not know that many soils contain a much larger proportion of lime than that we have recommended? Does he not know soils fertile without manure, as given by Johnson, Norton, and many other authors, accord precisely with the requirements stated by us in column No. 2? And can he suppose that in the face of the paragraph we have just quoted, that we could have intended to have recommended these amendments to be added in the quantities named? Would not any common-sense man understand that we give this as showing the components of a perfect soil, and advising the gradual approximation to such conditions as in the language of our letter?

"We agree with Mr. Browne that \$5 is too small a sum for an analysis of a soil, and for this reason we employ those who choose to work at that price, and use our time in writing the accompanying *Letters of Advice*, for which we charge \$25 each. But Mr. Browne seems not to be aware that many chemists are now engaged in analyzing soils at \$5 each.

"As to the gentleman to whom he refers, Mr. William H. Bradley, who was our pupil, and who lately died at the Saxon School of Mines, in Germany, we would refer him to the recent German Scientific Journals, to ascertain the reputation of Mr. Bradley, as an Analytical Chemist. We think he might find it at least equal to that of G. Blight Browne.

"Dr. Charles Enderlin, whose European reputation cannot be unknown to Mr. Browne, if he reads chemical works at all, has analyzed soils, (certainly sixty within the last two months) for us, at \$5 each, and with a degree of care fully equal to any that could be bestowed by Mr. G. Blight Brown, and probably with as just a conception of the state or condition in which the lime might be, that he might find combined with the soil.

"Dr. Antisell, Dr. James R. Chilton and others have analyzed for us at the same price.

"We find it more profitable to employ the services of others, and to confine ourselves to the writing of *Letters of Advice* founded on these analyses.

"A chemist who has one soil per month to analyze, certainly cannot perform it with any profit to himself at \$5 dollars: and while we admit that the price is too low, still we are well aware of the fact that the gentlemen we have named carry on the analyses sometimes of a hundred soils at once, causing them to be repeated by their pupils as tests of their exactness; and in a well systemized laboratory, where so large an amount of business is done in the analyses of soils, that it is not unprofitable.

"Mr. G. B. B. says that some of the most fertile alluvial land in Ohio contains but a shade over one-half of one per cent. of lime, but this lime is a *carbonate*. Does he pretend to say that an alluvial soil filled with organic as well as inorganic constituents readily adaptable to the use of plants, is to be taken as a guide for soils like the one analyzed by Mr. Bradley? If so, we should advise Mr. G. B. B. to review his agricultural studies.

Guano and Dwarf Pears.

The following information coming to us by a rather indirect route, we copy from the *Maine Farmer*, being an extract from a letter of one of its correspondents:

During a brief visit, last autumn, to an intelligent cultivator, who resides in New Jersey, on the banks of the Delaware, some 20 miles above Philadelphia, and who grows fruit and vegetables for that market, while conversing about his facilities for obtaining manure, he remarked that stable manure could be had, landed on the bank of his farm, from sloops, at \$2 per cord, but thought guano, at \$50 per ton, was decidedly cheaper, besides being free from weed seeds, and he used it almost exclusively. The soil was what we should call a good light loam, although it is there termed a strong loam, in distinction from the sandy lands of eastern New Jersey.

Among the many things which attracted attention at this place, the one that interested me the most was an orchard of 1500 pear trees, on the quince root. These were not all planted at the same time, nor were they alike in other respects, for some 300 or 400 of them were grown in this country, and grafted upon the common quince, probably the apple or pear quince or seedlings from them. These were *dearfish enough*, and though they had been planted 7 years, had borne but little, and decidedly realized the idea which used to prevail, that quince rooted pears were necessarily poor, weakly and short

lived trees; but the other 1100 or 1200 were fine trees, imported from France, and grown on the Angers quince, or some other hybrid variety, equally adapted to this purpose, and their condition was in striking contrast to that of the others. Thrifty, healthy, of vigorous growth, and bearing all they were able to do without injury. Having been carefully thinned out, the fruit was large and of fine quality, and presented a rich treat to the eye, as well as promise of a richer one by and by to the palate.

Among them were 150 trees, (three rows,) of the variety called Duchesse d'Angouleme, which had been planted four years, and were bearing nearly enough, and I am not sure but quite enough, to pay the cost of the trees, planting, and the land they stood on, for he had bargained the whole crop to a dealer in Philadelphia at \$1 per dozen, and would undoubtedly realize 12½ cents each for them; and how many pears, at that price, would it take to pay 50 or 75 cts. for a tree, and 25 more to plant, and mulch, and tend it properly the first year, and also, the 400th part of, say \$200 for an acre of land, (they were 8 feet apart, with ten feet between some rows,) and for two or three pounds of guano per annum, for three years, at 2½ cts. per lb? I reckon a dozen and a half would not be out of the way. I plucked one or two of them, although not fully grown, to bring home and compare with my own, which were growing on trees only two years planted, but they weighed 15½ and 16 ounces, and mine only 11½ and 12 ounces.

This, by the way, is a variety which always succeeds best on a warm, rich, light soil, and as mine was heavy, and the trees only planted some sixteen months, I didn't feel exactly inclined to "give up the ship" as yet. But to return to guano, which came pretty near being lost scent of in running over this orchard, there are two or three points of some consequence to be determined by the cultivator before using it, and his success, presuming, of course, that he buys a good article, will be very much in proportion to the correctness of his practice in regard to them—the quantity, the time, and the mode of application. The quantity should be *enough*—the time long enough before the seed for it to impart to the soil all its acid and caustic properties, and become thoroughly mild, and the mode would be to cover deep in light soils, and less deep in proportion as they are heavier. S. L. G.

Saco, Jan., 1853.

Points of Cattle.

We copy the following from the Journal of the New York State Agricultural Society. If properly carried out, and from the names of the Committee we have no doubt it will be, we may expect what has long been wanted, some *reliable standard* for judging stock. There is a vast amount of ignorance among farmers as to what the true and desirable points and *distinguishing* characteristics of the different breeds of animals really are. Durhams, Devons, Herefords, Berkshires, Southdowns, Bakewells, all have particular good qualities, *peculiar* to them as a *breed*. The points of a Hereford differ much from those of a Durham. The value of *each breed* relatively, may be a matter of opinion and discussion, but the animals themselves do not admit of comparison. As reason-

able is it to place the English cart horse and the high bred racer in the same class for competition. We want to know the true points of *each breed*, not to judge an Ayrshire by the standard of the Durham! The Chairman of the Committee, F. Rotch, is one of the most scientific and practical farmers and stock breeders in the country, and we look for something really valuable from his matured judgment and large experience. He is also supported by the weight of the most eminent breeders in New York, whose names have long been before the public. We shall lay the report before our readers at the earliest moment.

EXECUTIVE MEETING—FEBRUARY 8, 1853.

Present—MESSRS. PRENTICE, ALLEN, KELLY, VAN BERGEN, BLANCHARD, TUCKER, BUTTERFIELD, JOHNSON, CORNING.

POINTS OF CATTLE.

Francis Rotch, Esq., at the request of the Executive Committee, having prepared statements of the Points of the improved breeds of animals, the same were submitted to the Board by the Secretary.

Mr. L. F. ALLEN moved that a committee be appointed to take in charge the Points of Cattle, prepared by Francis Rotch, Esq., to consider the same and report to the Executive Committee, and that the Secretary supply each member with a copy of the same, and that they be requested to meet at their earliest convenience.

Committee—Messrs. F. Rotch, L. F. Allen, E. P. Prentice, J. M. Sherwood, Geo. Vail, L. G. Morris, R. H. Van Renselaer, C. S. Wainwright, Wm. Kelly, E. Corning, jr., E. N. Thomas, Thomas Bell, James Brodie, Lorillard Spencer, Robert Rome, A. B. Allen, Geo. Clarke, S. P. Chapman, W. H. Sotham.

Resolved, That the committee be requested to meet at Albany, first Wednesday (4th) May, at the Agricultural Rooms, at 10 A. M.; and should any member be unable to attend, that he forward to the Secretary his views upon the Points submitted.

QUINCES LOVE SALT.—The quince tree seems to have a constitutional fondness for salt. We have never seen, says the Horticulturist, such superb specimens of this fruit, and such a general luxuriance of the trees, as at Newport, Rhode Island, on the sea coast. A gentleman who noticed the fact, several years ago, told us lately that he had profited by the hint, in giving to each of his trees a top dressing of two quarts of coarse salt every spring. By scattering the salt over the surface it dissolves slowly, and does no harm whatever to the roots, but makes both foliage and fruit much more healthy.

CORN BREAD.—Every body who has been at the Mansion House, Buffalo, has learned the luxury of the far-famed corn bread there provided. The clerk is often taxed to write directions for home manufacture, and I thus procure a receipt for domestic use, which I copy for you, so that those who wish, may try a piece of bread from the mansion. It is as follows:

One quart of sour milk; two table spoonfulls of salcratus; four oz. butter; three eggs; three table spoonfulls of flour; and corn meal sufficient to make a stiff batter.—*Rural New Yorker*.

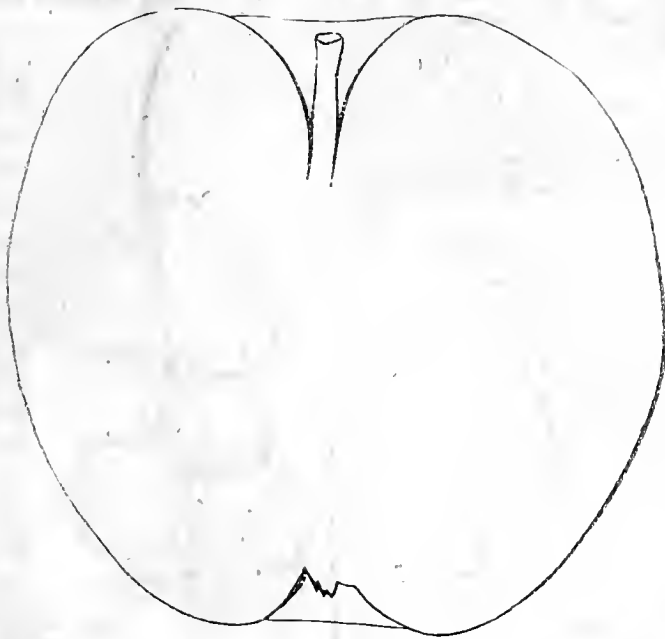


Fig. 1

Pennsylvania Seedling Fruits.

HECTOR APPLE. Fig 1. Large, oblong, somewhat conical, mottled and striped with red, on a prominent yellow ground, with numerous russet dots; stem slender, $\frac{3}{8}$ of an inch long, very deeply inserted in a slightly russetted cavity; basin of moderate depth, plaited; calyx small, nearly closed; flesh crisp; texture fine; flavor pleasant; core small; will keep through winter, till May.

The above is a seedling found a few miles east of West Chester, on a small property belonging to a colored man, Hector Mullen. The tree is the only one of the kind in the neighborhood, is about forty years old, a good and regular bearer, and is resorted to for some miles around, on account of the quality of the fruit. We have no hesitation whatever in recommending the Hector apple as eminently well worthy of cultivation in this section of country. Its large size, fair and fine appearance, will always make it saleable in market, and it is, besides, very pleasant and tender in taste, ranking at least, "very good."

Each State has its varieties of fruit, specially adapted to its own culture, some of which, at least, do not answer so well in other soils and climates. Fine seedlings, wherever originating, deserve to be treasured up and cultivated in preference to new and unknown varieties.

OTT PEAR. Fig. 2. This is a seedling from the seckle, originating with Samuel Ott, Montgomery county, Pa., and is a very valuable acquisition to our list of *early* pears, and one of the highest flavored known; approaching, in that respect, the character of its parent. Col. Wilder, of Boston, than whom

there is no higher authority, says: "The Ott is quite first-rate, and *in flavor*, surpasses Madeline, Blood-good and Bartlett."

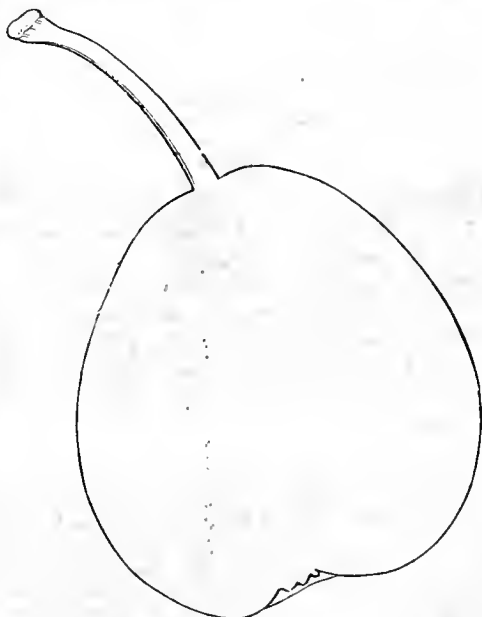


Fig. 2.

The original tree is about 16 years old. Fruit roundish, turbinated, skin greenish russet, with a mottled red cheek; stem one and a quarter inches long; cavity small; calyx large; basin shallow; core small; flesh whitish yellow, melting, rich, perfumed, aromatic; ripe in August.

BRANDYWINE PEAR, Fig. 3. Another very valuable seedling, originating a few miles from West Chester, and ripening about the same time as the preceding. We consider it equal to any other early pear. It *grows* vigorously with us, both on pear and quince stock, but has not been fruited on the latter, so far as we know. The shoots are pale olive, rather slender, but of upright and rapid growth, making

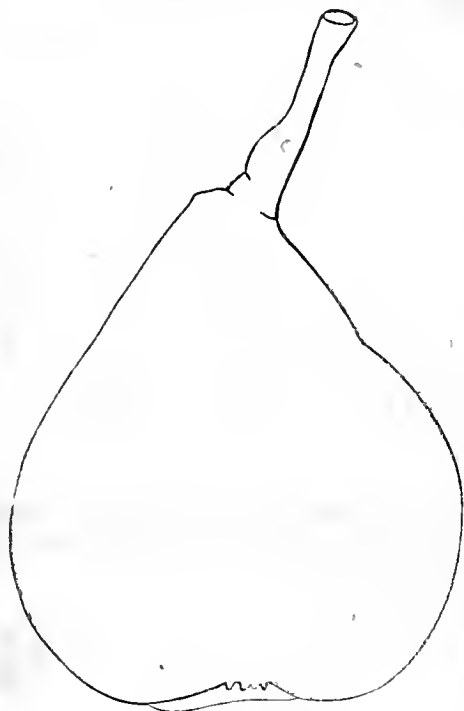
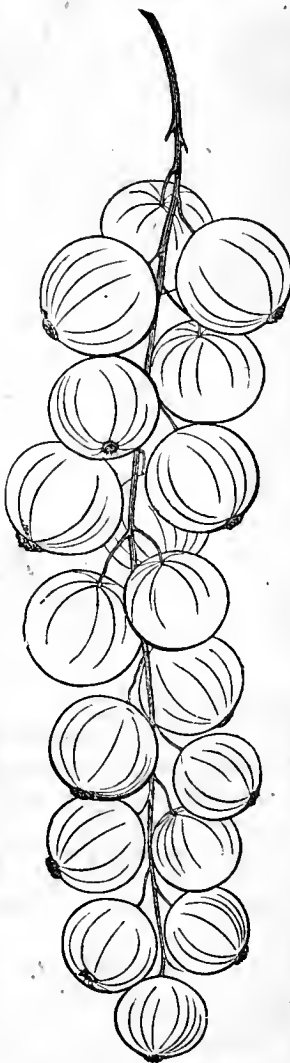


Fig. 3.

a handsome head. Leaves small, smooth, dark green, serrate. The shape of fruit varies somewhat, but generally resembles our engraving. Size medium; stem $\frac{3}{4}$ to $\frac{1}{2}$ inch long, fleshy at base; skin smooth, dull, yellowish green, marked with russet dots, and thickly russeted about the eye; calyx open, set in a smooth basin of moderate depth; flesh white, very melting, full of sweet, rich and refreshing juice; bears abundantly.

WHITE BLACKBERRY.—This fruit is noticed in a late number of Hovey's Magazine, by ROBERT MANNING. He says the color is like that of a very ripe Sweetwater grape; shape like the black; berries slightly smaller; flavor good. Its most remarkable property is "its productiveness, in which, (says R. Manning) it far surpasses anything else of the kind I have ever seen. The fruit is borne on long clusters, two of which come from every bud; and on two of these, fifty berries have been counted as the product of a single bud." In consequence of the poor success which has attended all attempts to improve the blackberry by seedlings, R. Manning recommends that it be crossed with this pale variety.

May's Victoria Currant.



In the general progress of improvement in fruit culture, the currant has not been neglected, and several new kinds are now cultivated, in place of the old and inferior common red and white. Our engraving faithfully represents what we have fruited for some years, and believe it to be the best red, MAY'S VICTORIA, or HOUGHTON CASTLE. It has been awarded the highest prize at the London Horticultural Society's exhibition, both for size and excellence. It was a seedling accidentally discovered by an apprentice to a jobbing gardener, who took care of the gardens of Houghton Castle. It is distinguished for its long bunches, five or six inches long, and very large berries, which often measure $\frac{5}{8}$ of an inch in diameter. The flavor is excellent, and the fruit hangs on longer than any other variety. J. Rivers says it is identical with 'Goliath'

a fine late variety. May's Victoria currant is much in demand, and we think fully deserves all the praise it has received.

THE HEN FEVER.—This modern epidemic has shown itself in our vicinity within a short time, and is characterized by all the peculiarities which have marked its ravages elsewhere. Some of our most valuable citizens are now suffering from its attacks, and there is no little anxiety felt for their recovery. The morning slumbers of our neighbors are interrupted by the sonorous and deep-toned notes of our Shanghai Chanticleer, and various have been the inquiries as to how he took "cold," and what we gave him for it. "Chittagongs" and "Burma Posters" are now as learnedly discussed as "Fancy Stocks" on change.

One of our Fanciers complains that he is obliged to use egg for coffee worth \$6 per dozen. Twenty-five dollars a pair is now no uncommon price for full blood chickens, and plenty of buyers at that.—||Indiana Farmer.

Dahlia.



We present our readers with an engraving of a *perfect Dahlia*. There are but few varieties that conform entirely to this pattern; but the great increase of new seedlings, and the difficulty of discrimination, where they are brought into competition, at Horticultural Exhibitions, makes it necessary to have a *perfect standard*. There are varieties whose outlines are quite equal to the above, and it should be the aim

of every cultivator to endeavor to approximate to it as close as possible. The London Horticultural Magazine, in describing a perfect Dahlia, says, "the flower should be a perfect circle when viewed in front, the petals should be broad at the ends, smooth at the edges, perfectly free from indenture or point. They should cup a little, but not enough to show the under surface. They should be in regular rows, forming an outline of a perfect circle, without any vacancy between them, and all in the circle should be of the same size, uniformly open to the same shape, and not crumpled. The flower should form two-thirds of a ball when looked at sideways. It should be inbricated, that is every petal covering the joints of the two petals under it, which perfects the circular appearance.

The centre should be perfect, the unbloomed petals laying with their points towards the centre should form a button and be the highest part of the flower, completing the ball.

The flower should be symmetrical. The petals should open boldly, without showing their under side, even when half opened, and should form circular rows, uniformly laid, and enlarging by degrees to the outer row of all.

The flower should be very double, and when well grown, four inches in diameter and not more than six.

The color should be dense, and free from splashes or blotches, or indefinite marks of any kind.

If flowers are exhibited which show the dise, or a green scale, or have been eaten by vermin, or damaged by carriage, or partly decayed, the examiners should reject them at once."

The season for planting dahlias is at hand, and in making purchases it will be well to select such as *approach* the above standard. The description may also be of use, in enabling committees at the differ-

ent Horticultural Exhibitions in the interior of our State, and where the best varieties of this superb flower are seldom seen, to decide understandingly, where the competition is close. We have seen persons standing in intense admiration over an old "straita Formossissima," and selecting it as a finer variety than fifty superb sorts close by it.

The Dahlia is an especial favorite of ours. Except the Rose, it has no rival out of the Green House, for brilliancy and variety of color, and splendor of general effect, when grown in large masses. They are very easy of cultivation, bloom profusely, and continue four to five months, till hard frosts. When grown singly also, in lawns or grass plots, and well secured, the effect by contrast with other shrubbery and by way of relief, is very fine.

The Dahlia has been improved by skilful culture in respect to height, as well as other respects. Indeed, this should be considered one point of excellence. Formerly, they used to require small bean poles, six or seven feet high; but many of the now ones have dwarfed, not growing more than half that. Queen of England, white and earmine, Miss Proctor, cream tinged with pink, and Yellow Standard, in our collection do not grow higher than three to three and a half. This is quite a desideratum.

We cultivate about eighty varieties. If asked to name the best twelve, we should say the following, in addition to the three above, and perhaps some of our readers will give us others, for the next number of the Farm Journal:

Antagonist, white, Princess Radzeville, white and purple, Madame Tahler, buff tipped with bronze, Roi des Points, crimson moroon, lilac tipped, Fame, shaded plum, Star, white tipped with crimson, Cecilia purple edged pure white, Jenny Lind rich, ruby purple, tipped with white, Miss Blackmoore, purple tipped with white.

When to Prune.

A correspondent has furnished us with the following text: "At what times in the year should the different kinds of pruning be performed, in the cold latitudes of the north and the milder climates of the south?"

We hold that pruning in general, in our northern climates, is safest after the severe frosts of winter are over, immediately before the swelling of the buds. When performed early in the winter, or in the autumn, as is practised properly in mild climates, the ends of the cut shoots dry up, shrivel and die; losing the buds intended to make leading shoots, and leaving dead points that require much labor to prune off afterwards; or if large branches are cut off, leaving a broad, fresh surface, the wood and bark dry up and require a long time to heal. We perform most of our pruning in the month of March, although a great deal of the less exact nursery pruning is done in February. Southward, as the winter is mild and spring early, we should prefer pruning very early in the winter or immediately after the fall of the leaf, because *activity* in the functions of the tree commences early, or scarcely ceases, as we must believe it does during

our intensely cold weather, and by pruning early we economise the sap and strength of the tree.

"*Pruning in the season when the leaves are on.*" The only pruning we hold to be sound, safe and commendable, at this season, is that of the *finger and thumb*, in other words *pinching*. It is quite inconsistent with good management to rear a crop of good shoots and then cut them away. This can only be avoided by nipping superfluous and misplaced shoots at two or three inches growth before they attain to woodiness. This economises the force of the tree and turns it into a channel where it will promote instead of frustrating the ends we are aiming at. For instance, if we plant a young tree, and have pruned it with a view to a certain form, and contrary to our expectations a shoot breaks out at an unexpected point, and assumes a vigorous habit and robs all other parts, it would evidently be unwise to tolerate this intruder until it arrives at full growth, and then cut it away. Too many trees are thus managed, by the neglect of summer pruning or pinching. We admit, however, that there are cases in which the summer pruning, or entire lopping off or cutting out branches of considerable size, may be judicious and safe. For instance in the case of neglected orchard trees, in a luxuriant state, with dense heads in which the fruit is deprived of air and light. In such cases branches may be thinned out and the cut surface heals over more rapidly and smoothly than at any other time. But it is unsafe to produce any very sensible diminution of foliage, as it arrests the growth of the tree.

All pruning in the growing season, tends to arrest growth. Nurserymen know that a slight pruning of stocks before budding, will so arrest growth as to make the bark adhere firmly; when, before the pruning, it lifted freely. It is only on this principle that most all pruning, to promote fruitfulness, must be done at a point of greater or less activity of growth. Late spring pruning is often resorted to as a means of subduing a superabundant vigor, and it has the same effect as root pruning to a certain extent.—*Horticulturist for Jan.*

Guano and Super Phosphate of Lime.

The usual practice of our Chester county farmers, and, indeed, of eastern Pennsylvania, is to rely on their barn yard manure for wheat and potato crops, seldom using any elsewhere, except an occasional top-dressing to pasture and mowing grounds.* The last season a very considerable amount of guano has been used in this section, and so far as we can learn, with very decided benefit and profit. Owing to the usual reluctance of farmers to put their thoughts on paper, we have been unable to obtain any accurate and detailed experiments, but, without exception, so far as we have heard, with No. 1, Peruvian guano, the results have been very satisfactory. Applied to the potato crop, spread in the furrows, and the potato dropped on it, as well as when sowed broadcast, the yield has in many cases surpassed that of a heavy coat of barn yard manure, in the adjoining strip. For the wheat crop it has also answered well where ploughed in previous to sowing. One farmer occupying rather a hilly place, says the whole expense of the guano, 300 lbs. to the acre, was not more than equal to the cost of labor, of merely hauling and spreading the manure, and the grass afterwards

better than where the manure had been applied. For the corn crop it has been found equally advantageous. As a result of its use the past season, the demand the present spring far exceeds that of last year, and we fear also the supply will be short. At the time we write it is scarce in Philadelphia, and commands \$50 per ton.

The introduction of guano, and the admitted fact of its great intrinsic value as a fertilizing agent, provided the supply is going to hold out, suggests a change in our system which has heretofore been more difficult; that of applying all the barn yard manure to the corn crop, which is a gross feeder, and using guano for the wheat. The increase of the corn crop will more than pay for cost of guano, and we believe there will be larger crops of both. As much of the strength of the manure will remain after the corn crop has had the benefit of it, and which is thus all gain, as is usually left in the fall, by ordinary process of exposure to the sun and rains for 5 or 6 summer months. The effects of guano have also been more permanent than was at first expected, and within our knowledge the benefit has been observed for three years after its application, and in one case four. Soils considered heretofore second and third rate, valued at \$40 to \$50 per acre, by its use at the rate of 300 lbs. to the acre, have been made to yield a product equal to that of the very best. As regards the super phosphate of lime, many inquiries have been made of us as to its comparative value with guano, but experience, in this section, has as yet been quite limited. Some few tons* were sold from the agricultural warehouse, in West Chester, last fall, but chiefly for the wheat, which, so far, looks well. Our farmers have been quite captivated with the high-flown colors of the advertisement in the Working Farmer, particularly where it speaks of an increase of a ton of hay to the acre, from the use of 100 lbs., and also 1100 bu. of roots to the acre, and are disposed to try it the present spring, as a top-dressing for their pasture and mowing grounds. If these expectations are realized, and especially if they are not, we shall have more to say about Professor Mapes' super-phosphate of lime. The condition of the ammonia, being in the form of a sulphate, (non volatile) would seem to indicate its preference over guano as a top-dressing.

*Of the kind prepared under the supervision of Prof. Mapes.

FRENCH MERINO SHEEP.—"The peculiar characteristics of the French Merinos are, that they combine both mutton and wool qualities. Whethers of this breed, at full age, dress from 30 to 35 pounds the quarter, and they shear from 8 to 28 lbs. of beautiful quality of washed wool. They are superior nurses, and very prolific, and naturally tame and quiet, requiring but little fence to control them."—*Northern Farmer.*

Making and Saving Manure.

A correspondent in the "Country Gentleman," under the signature of Composter, writes as follows:—

In the first place, let me say that my hogs are confined to the pen, and a small yard in the rear of it, nearly the whole year round, (my breeding sows only being allowed to range in winter.) My horse barn stands adjoining the pen and on one side of the yard. The manure from the horse stable is thrown directly into the hog-yard. The hogs are allowed the liberty of the yard, and so the horse and hog manure, and the litter of both, go together. The yard has been cleared so often, that the earth has been taken out more than a foot deep, and it will hold water like a dish; and the water that falls into the yard, with the urine of the animals, keeps it well saturated most of the time. Occasionally we scatter a few quarts of corn over the yard, and the whole mass will soon be turned up-side down by the industrious pigs; and in this way I can have it turned just when I wish.

The whole is allowed to remain in the yard through the summer, and in the fall I find it all rich and rotten manure. The horse manure, which otherwise heats and dries so much, and by evaporation loses half its fertilizing properties, without a great deal of extra labor is bestowed upon it, is now thoroughly mixed with the hog manure, and all improved thereby. By a liberal supply of bedding to both horses and hogs, one may increase this heap to several loads for each animal kept.

When straw is not at hand, a resort to the woods for leaves as bedding, is an excellent substitute, and they are certainly within the reach of all. I have drawn several loads of them this fall, and find them good for bedding. Any one who has not tried it, will be surprised to find out how easily and quickly they are obtained.

The Horse Stable.

There is scarcely any class of people, who have more professional pride than hostlers and the various kinds of drivers, especially coachmen; and the person who is not too proud to learn, can gather very much practical information, as well as shrewd experience, from these rough specimens of humanity. The experienced hostler has a hundred little appliances by which he succeeds in making his favorite appear to advantage; and we have often been surprised at what we should call the "good, hard, horse sense" that seems to be held in common by groom and steed.

This class of stable boys need no lessons from us. We have taken up our pen to give a few hints to the large number of those, who, being men of all work, are their own drivers and grooms, as we were for some time; when we took especial pride in waiting upon our good steed, before we took thought for ourself.

The Horse Stable should be so constructed that currents of air can be effectually shut off from coming directly upon the horse, when desired. This is frequently impossible in many stables that we have seen, in consequence of open seams, through the siding and floors of the stalls. A horse put in such a stall, coming warm and moist from the road, with the winter winds blowing upon his reeking hide, is very much in danger of taking cold, and laying the foundation of disease, aside from the immediate discomfort and stiffening of his body. His back may be kept warm by a blanket, but his legs will be still sadly exposed, and thus the elasticity of his travel impaired.

The Stable Floor, for draft horses, we should al-

ways prefer to have lowest in front, except for the reason, that such a stable cannot so readily be kept dry and clean. We prefer it, because when standing upon such a floor the muscles which were most employed in draft, are temporarily relieved and rested, and it will be perceived that when a roadster is in pasture, and at liberty to choose his position, he will rest himself with his fore feet lowest. But as it is highly necessary that the horse be kept dry and clean, we should allow a falling back of some two inches in ten feet, in the planks of the floor.

The Feeding Box for hay, should be a manger, coming down to within some eighteen inches of the floor, leaving underneath, that space for the bedding, during the day time. Of the general subject of *horse and stock feed*, we shall speak at another time. The stable should be so arranged with regard to *light*, that a person on coming from without, would experience no difficulty in discerning objects within. We do not approve of having a bright beam of light, let in immediately upon the horses eyes; but should prefer a well-diffused, subdued light. *Ventilation* should be well provided for, to dispose of the foul air and keep up a proper circulation.

Bedding should not be neglected, and on this subject we have bestowed some attention of late, especially in observing the results of an experiment in the extensive Livery and Sale Stables of Messrs. Blake & Williams, of this city. The material used for this purpose is *saw-dust*, and the results have been highly satisfactory. Several bushels of dry saw-dust are thrown into the stall, upon which the horse stands during the night. In the morning it will be found that about a bushel has to be removed—one half of which is manure, and one half saw-dust, so well saturated as to contain a large portion of ammonia, performing the double office of absorbent and purifier; thus the air of the stable is kept pure, and the ammonia saved for the compost heap. This compost Mr. Blake has applied to his stiff clay land, and reports that it operates like yeast, making the ground very light and mellow. In the morning, that portion of the bedding which remains dry is shoved up under the manger, to serve for another night.

Another advantage from this material for bedding is that a horse which lies upon it is much easier cleaned off than one which lies on straw; the saw-dust entering among the hair, brings away the secretions, when the curry-comb and brush are applied, leaving a bright lively coat. In warm weather it has another great advantage, that of being much cooler than straw, so that a tired and heated horse can sleep pleasantly, without incitements to feverish restlessness. The establishment of steam mills in all parts of the country, renders the material easy of access to almost every neighborhood, and we doubt not, when its virtues are better known, it will be generally applied to stable use, as a means of comfort to the horse, and also of turning an otherwise useless article into profitable account.—*Ohio Cultivator*.

MEASUREMENT OF HAY IN BULK.—Multiply the length, breadth and height of the hay into each other, and if the hay is somewhat settled, ten solid yards will weigh a ton. Clover will take 11 to 12 yards to a ton.

An English Quarter of Wheat is eight Imperial bushels, of 70 pounds each, 9 1-3 American bushels, of 60 pounds each.

Breeding Stock.

The following very excellent remarks on breeding, by L. C. Ball, of New York, are well worthy of attention. The article appeared first in the Ohio Cultivator.

Mr. BALL says:—"The experience of all herdsmen and breeders, from the days of Jacob down to the present time, has only tended to one result, namely—*That like produces like.* On this principle have all the changes of form and habits which separate wild from domesticated races, and which characterise the numerous breeds and varieties of improved animals been made.

So well understood is this principle, that no desired property, whether of strength, speed, form, temperament, or disposition, is considered unattainable; and no fault or imperfection, but what may be eradicated, and the intelligent breeder pursues his object with a confidence of success, which the result fully justifies.

"This power of man to affect useful alterations in the animal creation," is shown by the fact that among every species of domesticated animals, there is a great number of varieties, each characterised by permanent marks and qualities, of color or form, or by the size and shape of particular organs and parts. These varieties, though differing widely in appearance, qualities and habits, are all obtained from one original stock, by the continued observance of this one principle: Of breeding from those individuals which possess the desired qualities in the highest degree, and rejecting all those in which opposite tendencies are perceptible.

If animals with short limbs are desired, then all those individuals of the species which have these parts of more than medium length are rejected: and from each successive generation, those having the shortest limbs are selected to be the parents of the proposed new variety; and thus, in no very long period the work is accomplished.

So far has this practice been continued in the case of swine, that animals of that species have been bred in which the limbs were not of sufficient length to raise the body from the ground.

The passion for small heads and fine limbs is at this time so great, that animals are frequently produced in which the head is hardly large enough to perform its appropriate functions, and the limbs are unable to support for any long time, the weight of the body.

But every rule has *apparent* exceptions—and none more, or more fatal to the hopes of the breeder, if blindly followed, than this, *that like produces like.* For instance—an animal is obtained, which combines to an eminent degree all the qualities which render the species useful; and the owner indulges the expectation, that the offspring will possess all the good qualities of the sire, and that henceforth his pastures and stables will be filled with the best and most perfect specimens of the breed. The result, however, disappoints his expectations, and leads him to doubt the correctness of the rule he has so rigidly and perseveringly followed; for not one of the progeny reaches that degree of perfection which marked the sire, while more than half are below the standard of mediocrity.

How are these facts to be reconciled, and the principle so clearly understood as to be practically useful?

Philosophy and experience have demonstrated the fact, that animals, from the highest to the lowest, *frequently resemble remote ancestors, and renewed forms that existed long before the birth of their own parents*

between whom and themselves, no similarity is discoverable.

Who has not seen some human individual, standing alone in the family, bearing no resemblance in feature or habits to parents, brothers or sisters; and who was evidently sent back to gather up the scattered threads of life's web among the graves of a preceding, perhaps remote generation.

The fact is very clear that animals transmit to their offspring qualities which they do not themselves exhibit, but which they have nevertheless inherited, and preserved in latent or rudimentary forms. How else can the too common and melancholy fact be explained, that those hereditary diseases which afflict one generation of the human family, pass harmlessly over the second, and break with desolating fury upon the third.

The animal, whatever traits of excellence it may possess, whose offspring exhibits defects of form and constitution, *has come from an impure stock, in which the same defects were prominent;* and therefore the result, though seemingly contradictory and inexplicable, is just what no intelligent observer of nature's laws might confidently predict.

If the breeder who looks with admiration upon the good points and fine appearance of an animal, could know the history of its ancestors for a dozen or twenty generations, he could much better judge of its value, and the propriety of transferring it to his own flocks or herds.

Important improvements may doubtless be effected, within short periods of time; but these improvements, to become inherent, and constitute permanent and unvarying types, must be continued in *unbroken succession* through many generations.

Those animals, therefore, which have descended from a superior race, through a long and unbroken line of healthy ancestors, are the only reliable sources to which the breeder can resort, for preserving useful qualities already obtained, or for reaching to a higher degree of excellence.

Fresh Imported Stock.

The following list of recent importations of fine stock, by Lewis G. Morris, Mount Fordham, West Chester county New York, is taken from the Boston Cultivator. Such enterprise is worthy of all praise, and whether profitable or otherwise to himself, is a large contribution to the public good, the value of which is not easily estimated.

SHORT-HORNS.—Bulls. "Marquis of Carrabas," roan, calved Jan. 16, 1851. Bred by and purchased of F. H. Fawkes, Esq., Farnley Hall, Otley, York shire.

"Romeo," roan, calved April, 1850. Bred by and purchased of the Marquis of Exeter. The latter selected for N. J. Becar, Esq., Long Island.

Heifers: "Bloom," red rose, calved January, 1850. Bred by Fowle, North Allerton, Yorkshire; purchased of J. S. Tanqueray, Esq., Brent Lodge, Hendon, Middlesex.

"Romelia," roan, calved 1851. Purchased of J. S. Tanqueray.

"Lady Booth," calved December, 1850. Bred by J. Emmerson, Eryholme, purchased of J. S. Tanqueray. The latter selected for Mr. Becar.

Devons.—Bull: "Rodney," alias "Frank Quartly," calved March, 1851. Bred by and purchased of Mr. John Quartly, South Molton, North Devonshire, "Earl of Exeter" (38) dam, "Curly" 96.)

Cows: "Birthday," (38.) Bred by and purchased

of J. A. Thomas, Esq., South Molton, North Devon: "Princess" (380.) Bred by and purchased of James Quartly, Esq., South Molton, North Devon.

The figures refer to the numbers of the animals as registered in the Devon Herd Book. None of the Short-horns except "Marquis of Carrabas" are yet registered in the Herd-Book, their owners having omitted to send their pedigrees to Mr. Strafford, the editor, previous to Mr. Morris' purchase; but they will be inserted in the next volume. Both Short-horns and Devons are very fine specimens of their breeds. The Devon cow, "Birthday," received several prizes in England, and is one of the most beautiful animals we have ever seen. Her breeder, Mr. Thomas, was a very successful competitor of the late show of the Smithfield Club. The other cow and the bull are also very fine; the latter especially very complete in form, and of good size and firm constitution.

SWINE.—Mr. Morris also brought out an addition to his stock of Essex, Suffolk and Berkshire swine. The Essex were bred by and purchased of W. Fisher Hobbs, Esq., Boxted Lodge, near Colchester. The boar is of the best of this gentleman's noted stock, and is altogether a most perfect specimen of his species. The Suffolk boar, an excellent animal, was bred by and purchased of Lord Wenlock, Yorkshire. The Berkshires were purchased of Mr. Wilson, bailiff to Sir R. G. Throckmorton, Berkshire.

SHEEP.—Mr. Morris brought out for himself and Mr. Bear, two South-Down rams and six ewes, bred by and purchased of the celebrated breeder, Mr. J. Webb, Babraham, near Cambridge. He had before, quite a flock of South-Downs, as purchased of Mr. Webb.

In addition to the above stock, Mr. Morris selected and brought out for Mr. Corning of Albany, three Herefords; a bull and two heifers.

The London Poultry Show.

From the 11th to the 13th of January, there was a grand poultry show in London, at which were exhibited no less than 615 pens of different species of fowls, each containing from two to four animals—besides eleven pens of geese, thirty-three of ducks, ten of turkeys, two hundred and forty-nine of pigeons, and forty-eight of rabbits. Of the fowls there were two hundred and forty-nine pens of the Cochins, sixty-three Bantams, seventy Dorkings, besides Spanish, Malay, Hamburg, Poland, &c. On the first day there were some hundreds of visitors, at an admission fee of five shillings, on the second day over five thousand at a shilling, and on the third day a much larger number at the same price. Very high prices were put upon some of the pens. At the auction sale on the last day the highest price paid was \$240, for a Cochins cock and pullet. The general selling prices varied from fifty to two pounds for each pen.

The London Correspondent of the National Intelligencer says there were three geese which weighed together 48 pounds. There were gigantic pigeons from India with magnificent plumes; beautiful Australian pigeons of most delicate plumage; turkeys of prodigious size; and four Cochins fowls, for which £63 (or \$315) was required. There was a single hen for which thirty guineas (\$150) was refused.

At the sale which took place at the close of the exhibition, 110 birds of the Cochins China breed, the majority of them being young ones of three or four months age, realized £369. The highest price

obtained for a single bird was £21. For the eggs, 5s. to 10s. each was readily obtained. One pair of Cochins China fowls fetched £49.7.

A number of agriculturists attended the sale who appeared to receive an impression that the breeding of poultry was becoming more profitable than the breeding of cattle. The times has the following utilitarian notions upon the subject:

"A fowl, after all, is not materially the more precious for being "gold" or "silver pencilled," "white crested" or "double-combed," though "double-breasted," is procurable, might be an eligible quality to introduce. One variety we see styled "dumplings" or "bakies," attracted great admiration for the extraordinary shortness of their legs;" but we scarcely understand the advantage of this feature, unless, indeed, they will go into a smaller saucepan. The end, in short, of all such exhibitions as that now open, should be the improvement, not of private "collections," but of the public stock, and the breed deserving the price is not that with the largest comb or the rarest plumage, but with the best promise of general usefulness. If, twelve months hence, eggs should prove better, chickens cheaper, and all poultry more abundant than now, we shall be the first to acknowledge the benefits of the Baker street show; but, if the result is confined to the monstrosities of private "collections," there will be but little credit gained by the notoriety of this week's display.

Bots in Horses.

The following on the subject of Bots in Horses, gives some information, new and interesting to most people. We copy from the "Journal of Agriculture:"

Many years ago, assisted by Dr. Roe, of White Plains, N. Y., we made examination of a horse that appeared to have died with the bots. We found the cuticular coat of the stomach almost entirely covered with them. They were upon the top, and upon the bottom, and upon both sides. They worked side by side, like lazy street sweepers; and were in no wise hurried or interrupted in their operations by our observation. Some were lapped over others, as sucking pigs who get the upper row of teats are wont to feed. They ate systematically, and as I remarked in the paper quoted below, "they swept clean" as they progressed, as a silk-worm cleans a mulberry leaf. The stomach was alive with these sluggish but persevering pests. But that the horse died of the bots, although there is reason so to think, we dare not undertake to say; for the weight of authority is against us, nevertheless, *we think he did.* * * * *

We "exhibited" to our subjects a tempting dose of sweetened milk; in fact we submerged a portion of the stomach in milk and molasses, but the adult bot preferred the tripe, whatever the baby bot might do with the drink. We tried an application of sulphuric acid, (oil of vitriol,) to their backs, without perceptible effect. We steeped the portion of the stomach in the acid without at all interrupting their meal. This is accounted for by the fact, that the bots are coated with mucus, which defends them against the acid. Finally, we tried a powerful burning glass; and either worried out by the protracted fight, or unequal to a contest with the sun, they gave up the ghost. But this remedy would be somewhat difficult of administration, with a living horse, and therefore we do not "patent" it.

After the bots are full grown and fairly established, and in operation, they are safe from most applications; for this reason, that as many of them must be

engaged on the upper portion of the stomach, medicine cannot reach them, unless the stomach is kept constantly full of the medical agent, and besides, their mouths are so deeply buried in the business before them, that they will not quit it for the most seductive drug.

In view of the whole matter, we come to these conclusions. So long as there exists a sufficiency of mucus in the stomach, the bots will not attack the cuticular coat, and will at the proper time be disengaged, passed out of the stomach with the chyle, and evacuated with the dung.

In the commencement of the attack they may be expelled by the remedy recommended, (sweetened milk,) or more easily by green and succulent food. So long as they confine themselves to the mucus, their presence is not dangerous to the life or health of the animal, though they cannot be claimed to be positively essential to his comfort and well being. The act of eating the cuticular coat is not of itself painful to the horse, for the coat is insensible; but, the cuticle removed leaves the stomach at least liable to inflammation. At this stage we do not doubt that fatal effects may follow.

On the whole, it appears to us as idle to say that horses do not die of the bots; as to deny that children die of measles or hooping cough, because the cases are rare, where *rightly and seasonably treated*, they do not recover.

Training Steers.

The following mode of training the wild and unmanageable steer, into the gentle and well-trained ox, is both reasonable and instructive. We extract from the "Country Gentleman."

The first point is to make them tame and gentle. This may be accomplished by feeding them out of the hand, and earthing them daily. They should be approached gently, without yelling at them until they are frightened out of their wits. After having reduced them to a state of perfect docility, a good yoke should be procured, suitable to their size and strength. A small pen is necessary to put on the yoke; approach gently with the yoke, patting and speaking gently to them until you have the yoke on the off steer; then let an assistant drive the other under the yoke. Their tails should then be securely fastened, to prevent their getting the habit of turning the yoke. They should be yoked in the morning, and unyoked at night—in this manner, for several days, until they become accustomed to the yoke.

The first thing to teach them is, to stop at the word of command. This may be done by striking them across the face; the blows should be repeated until they stop, and then discontinued; by striking them for every non-observance of the word of command, they will soon learn that by stopping they will avoid it, and will act accordingly. They may be taught then to "gee" and "haw," by gently pushing them around. Backing may be taught by beginning with an empty cart on a side-hill; then on a level; then with an increasing load, until they will back nearly the same load they will draw. They should never be put to a load that they cannot readily draw; or drilled by prolonged exercise beyond the period when it becomes irksome. Long and repeated yelling, or the use of the lash, is both cruel and useless. Clear and intelligible, yet low and gentle words, are all that is necessary to guide a well-trained ox. The ox understands a moderate tone more perfectly than a boisterous one, as all sounds become indistinct as they

increase. A command should never be given unless enforced. Many bear with bad tricks for a long time, without even an expression intelligible to them—but when patience departs, a thorough storm of blows is poured upon them. This is the way to ruin every beast; a single blow should be given for each offence.

Polishing Plows.

To all those who are expecting to go through with the old operation of polishing a new plow, by scraping it the following spring, I would propose the following cheap and effectual remedy:—

Go to any druggist shop and procure 4 oz. of sulphuric acid, or oil of vitriol, which will cost from five to ten cents, according to the conscience of the druggist. Take a stick and wind upon the end of it a wollen rag, and tie it on with a coarse strong twine, making a swab; set your plow where it will be exposed to the sun, if convenient; then pour the sulphuric acid into an earthen bowl, and dilute it with an equal quantity of rain or river water. Take the swab and thoroughly moisten every part of the plow that requires polishing; work fast, lest the acid eat up your swab before you have gone over the surface, and be careful not to get any on your clothes or skin, for it is very corrosive. Let the plow stand about 24 hours, then scrape off the scales which will have arisen all over the surface wet with the acid; hitch on the team and go ahead, and in from fifteen minutes to one hour, the plow will be smooth and bright.

The rationale is this. The outer coating of the castings is composed of a mixture of sand and iron, more or less porous, thus admitting the free passage of the acid, which decomposes the iron, changing it to an oxide, and as soon as the solid iron is reached, the action of the acid terminates, or is very slight, owing to a want of surface upon which to act.

Original Communications.

For the Farm Journal.

Planting Trees.

Much has been written about the best time and mode of planting trees, some recommending the autumn, others the spring, some advising deep planting and others objecting to it as improper, and scarcely agreeing in any essential particular respecting the time or the mode. Believing that I have learned something from the mistakes I have made, I propose to give, through the Journal, some opinions on these subjects. Of those woody plants that are quite hardy in this climate, and grow freely from cuttings, it is found that many of them succeed best if the cutting is cut smooth at the base, at or about the time that the autumn growth has entirely ceased, and inserted in light soil in which the superabundant moisture will freely drain off; under these circumstances, a callus is generally formed during the winter, from which roots are emitted early in the growing season. But if the cutting is put in a heavy clay soil, retentive of moisture, there will be no callus formed, and the base of the cutting is frequently so much injured by the superabundant moisture during the winter, that no growth will take place; and if the base of the cutting is rough and uneven or ragged,

it is very common that the rougher points die, and that the disease thus begun, extends to the entire base of the cutting. In the case of heavy wet soils, it is better to take off cuttings before the commencement of growth, and cover them with sand, till the ground is in working order in the spring, and then put them in the ground for growing. Such I believe is the case with the greater part of hardy, deciduous, woody plants that grow freely from cuttings. The difference between growing cuttings, without roots, and trees with roots, is much in favor of the latter, but the healing of the wounds, made in taking up the tree and separating the cuttings, is almost equally important in both, and the circumstances favorable to one, we may fairly infer to be also favorable to the other. If, therefore, what I have stated of cuttings be true, as I believe is generally admitted, it would follow that hardy trees will be planted in dry, light soils with most success in the autumn, sufficiently soon after the cessation of growth to heal the wounds of the roots before the severe weather commences; and that in heavy, wet soils, the planting should be deferred until the ground became in working order in the spring, in every case cutting the broken and wounded roots smoothly so that they may heal freely. The ground should be in good working order at the time of planting, and well pressed down, so as to come in close contact with every part of the roots. Now as to the mode of planting. It is frequently recommended to dig a deep hole, filling up so much with good garden soil as will leave sufficient depth for planting the tree; this, in light deep soils, and porous, open subsoils may be right, but in those places in which the subsoil is an impervious, hard pan, or retentive clay, holding water, it is obvious that the good soil in this pit must, in the wet season, be entirely saturated with water, in which healthy growth can hardly take place, and in the dry season it will promote vigorous growth only so long as till the roots shall have extended to the sides of the hole, when, being below the soil they must penetrate into the stiff, unyielding and barren subsoil, or turn up at the edge of the hole, (as if they were in a tub) until they reached the soil, so as to escape from the pit, in either case the growth will be affected injuriously. It is important, especially for common fruit trees, that the roots pass freely through the fertile soil, and that they should not be placed below it; and, therefore, it would be better in those places where the subsoil is very retentive of water, instead of digging a deep hole and bringing good soil and putting in it to support the tree, that the soil so brought be placed on the surface and the tree planted in it, the roots then would exert their natural tendency to grow outward and downward without being obliged to enter the subsoil.

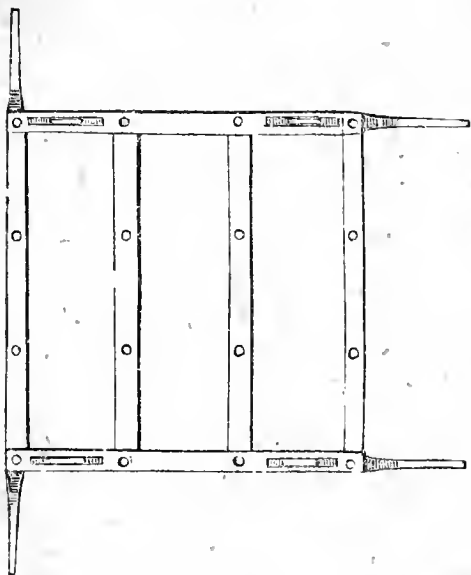
It is common in many places to plant a field, or more commonly a part of a field, with apple or pear

trees as an orchard, and then to subject the field to the usual rotation of crops, viz: Indian corn, oats and wheat, one year each in succession, then grass two years for mowing and one or two years for pasturage. This course has two great disadvantages; one of them is, that the cattle during the time of pasturage destroy many trees; and the other is, that during the seasons that the land is plowed yearly, the tree roots are not allowed to rise into the plowed ground, but are kept immediately below the run of the plough; but the ground being kept loose and open by culture, they receive the rain and moisture freely, and during the first half of the corn season, and the latter part of the oats and wheat years, without much competition from any growing crop. But then follows three or four seasons of grass, during which time the ground is not ploughed, and the whole surface covered with grass, and the trees having to compete with the grass in obtaining nourishment, it becomes necessary that the small roots make their way upward toward the surface in order to obtain a portion of the rain and dew sufficient to support their growth, and toward the close of the grass seasons the tree is mainly supported by roots drawing their sustenance from very near the surface—in the very best soil. But now comes the sad reverse. A deep ploughing takes place for Indian corn, and these roots are now cut away, and for three years the tree has to seek its support through a smaller number of roots, and which have for years been almost inactive. Although young and healthy trees may support a few changes of this kind, yet they cannot be so long lived or so protracted and vigorous as they would be without these periodical and violent changes. Ploughing annually with sufficient manuring, or not ploughing at all would either of them be better for an orchard. A good method of raising an orchard is, first: Enclose the quantity of ground wanted, with a good fence; after one year's cultivation with corn or potatoes, plant the trees; keep the ground in cultivation for several, say ten years, with Indian corn, potatoes, pumpkins and crops of that kind that require cultivation during their growth, giving sufficient manure to keep the land fertile, and never putting rye or wheat in it. As the roots and tops of the trees extend, do not plough or put in crops close to them, so that neither the roots or tops may be touched by the plough or the team. At the end of the term of ten years, or perhaps earlier, the culture may be discontinued, and the ground used only for the production of fruit. No horses, except for ploughing it, nor cattle or swine should be permitted within the enclosure till the trees are nearly grown; after which time hogs may be let in during the time that unripe or wormy fruit is dropping. In this case trees may be planted closer than when it is intended to continue cropping. I think 25 feet would be sufficient, and the trees

should be permitted to branch nearer to the ground than is allowable where it is intended to continue the orchard in cultivation. The heat of our summers acts injuriously on the bodies of apple trees when the tops are not sufficiently large to ward off the rays of the sun during the hottest part of the day; and, therefore, other circumstances being equal, a cool northern or northeastern exposure is more suitable for apple orchards than a warm southern or southwestern one.

A. W. CORSON,

Montgomery co., 2nd mo., 24th, 1853.



Planting Corn.

For the Farm Journal.

TO THE EDITORS OF THE FARM JOURNAL:—

As the cultivation of Indian corn is attended with much labor, I ask the liberty of presenting a device by which the tedious process of marking off the ground with intersecting furrows may be avoided, and the ground left less liable to wash by heavy rains prior to cultivation. The contrivance for this purpose, I call a spacing frame. See above engraving. It consists of a square frame of a suitable size, with four projecting fingers. The sides and interior of the frame are so constructed as to indicate the points for dropping hills of corn. The design of the fingers is to connect with the adjoining rows of dropped corn. The frame may be made of light lath, well stiffened at the corners, and large enough each way to extend the breadth of four hills of corn. At equal spaces across the interior of the frame should be inserted two pieces of lath, and the whole so squared and spaced off as to indicate the points for dropping sixteen hills of corn. At the dropping points, holes may be made and funnels of leather or other suitable material inserted therein. Near the corners, hand-

dles may be placed for greater convenience in moving the frame forward. The frame may be made lighter and cheaper by omitting the interior lath and funnels, and placing elastic strings, at right angles, in their stead. Indeed, all the funnels may be dispensed with by substituting marks on the sides of the frame, to show where corn should be dropped. On the other hand, the funnels may be made so as to contain the seed with sliding valves connected by wire, to enable a person to drop four hills at a time. But I believe the more simple plans to be better. Simple devices are more within the reach of every one, and less liable to get out of order.

DIRECTIONS FOR USING.—The ground being plowed and well harrowed in the usual form, a straight line may be drawn the breadth of the field, sufficiently near the fence by means of a piece of twine and a few stakes, to guide the instrument the first time across the field, after which it will be guided by the dropped corn, one row being left uncovered for that purpose. Two persons, appointed to drop, each provided with a basket of corn, can place the frame near the end of the string with the two parallel fingers in contact with the line; then drop the hills as spaced by the frame. One dropper then takes his station in the foremost corner of the frame, next to the line, and the other behind the opposite corner, and carrying the frame forward until the hindmost dropper can place the finger next him in contact with the dropped corn, and the foremost then place his in contact with the line; drop again, and so on, across the field. On returning across the field, (if the frame is made correct,) the corresponding fingers will keep in concert with the dropped corn. Should the rows become crooked by carelessness or the unevenness of the ground, it will be necessary to straighten afresh, as the instrument will not work well only in a straight line.

I anticipate an objection against this mode of planting on the surface of the ground: that the corn will not grow so well.

The fairest experiments having been my guide, I could not perceive the smallest difference in favor of furrows; but between a poor, shallow soil and a deep, rich soil, the difference is strikingly obvious.

Spacing frames on the above principle may be constructed for dropping other seed besides corn. Small ones can be made for horticultural purposes, and they can be so varied in structure as to enable a person to drop seed in continuous parallel rows. Last spring was my first opportunity for trying my device. I planted about ten acres, dropping it in the above way; and although part of the field was hilly and uneven, it was done to my entire satisfaction, thus saving the labor of marking with the plough.

The easiest plan of outwitting the insects, which I have experienced, is to plant plenty of seed; I find it better to pluck up than replant.

The writer's motive in presenting the above simple innovation is a desire to benefit others. It is referred entirely to your discretion. Should you deem it proper you can "place it on the track," or you may, without offence, slide it off the "embankment."

M. LARKIN,

East Brandywine, Chester county.

Fall Ploughing.

MR. EDITOR:

The subject on which I shall make a few remarks, is one which I consider of importance to every farmer, and one that I have never seen discussed in the Farm Journal, though other subjects of less importance has been commented on in its columns. I mean the proper time for ploughing corn ground.

I have been a practical farmer for some time, and a constant reader of agricultural works, and yet can I never adopt the popular plan of ploughing my corn ground in the fall. I have frequently conversed with the advocates of fall ploughing, and the principal reasons urged are: a preventive against the cut-worm, advance with their spring work, and that their teams are in a better condition to do work in the fall than in the spring. The first of these reasons may, in a measure, be an inducement to some for fall ploughing; but to me it is not, for I never have had much trouble with the grub. My mode of management is to plant deep with the hoe, and not too early in the season. The advantage I find in planting deep is, that if the worm cut off the stalk, it still grows on without injury, and if planted shallow, the worm takes it so close to the grain that it must die. As to the two other reasons, I think they should have little weight, for in my opinion, teams well wintered; are better able to perform hard work in the spring than they are in the fall, after a whole summer's hard work.

My own experience too, has taught me that ground ploughed in the fall, and subjected to the action of the frosts, heavy rains and snows of our winter, will become hard and unmanageable the following spring and then will require as much labor to get it properly pulverized as another ploughing; and then my impression is, it will not retain moisture as well as spring ploughing.

Another reason for spring plowing is that it can be better done than in the fall, the ground being always in better order for ploughing.

I have seen plowing done in the fall that I would not have thanked a man to have done for nothing, on my farm, in consequence of the ground being too hard.

To prove my position, I find in referring to agricultural works, that where there has been an extraordinary yield, it always has been the product of spring plowing. In looking over the February number of

the Farm Journal I find, for raising the premium crop of 160 bushels per acre, Mr. Walker ploughed in the beginning of May, and planted the last of May. In the same number of the Journal I find, for the next premium crop, Mr. McCrea has given his time for plowing as some time in March, and that very little after culture was necessary to keep down the weeds.

In the January number of the Prairie Farmer of 1847, I find an article signed A. L., which speaks thus of fall ploughing for corn:

"In the place where I live, fall ploughing for corn, after repeated trials, has mostly been abandoned on old land, especially early fall ploughing. I have succeeded best with the corn crop—taking into account labor and yield—where the planting followed the ploughing as soon as possible."

I shall here say that I fully concur with A. L. in saying that taking in account labor and yield he is in favor of spring ploughing. I have always found the yield better in spring plowing, and labor much less in keeping weeds and grass down. Yours, &c.

SAMUEL MUMMA.

Locust Grove Farm, Dauphin co.,

February 15th, 1853.

For the Farm Journal.

Agricultural Review--No. 1.

The township of Birmingham, Chester county, Pa., is situated five miles south of West Chester, the county seat, 13 miles north of Wilmington, Delaware, and 25 miles west of Philadelphia: these are the markets which receive its products. It contains two grist and saw mills, with machinery attached for grinding plaster and cob meal, one shingle machine, one store, one blacksmith and two wheelwright shops, one tavern, which, and the store, I regret to say, are licensed to sell spirituous liquors, by inhabitants of the township, the demoralizing effects of which are plainly evident in the vicinity; two places of worship, one school averaging thirty scholars, one Library of 2,000 volumes, numerous quarries of excellent building stone, and one of limestone on its border. Population about 300.

It comprises about 3,000 acres, skirted on the west by the Brandywine creek, (bordered by extensive meadows,) and is intersected throughout by small streams of the purest spring water, affording, in connection with the spontaneous growth of the natural grasses, "green grass," *poa pratensis*; "blue grass," *poa compressa*; white clover, *trifolium repens* and others; facilities for the method of farming practiced; grazing accompanied with grain raising, not excelled in many other situations; and which, though less profitable than others, is less laborious, both in the family and field.

The surface is mostly rolling; soil a deep sandy loam, inclining to clay in the flats, and containing a

considerable per centage of small stone; subsoil sandy and gravelly on the upland, clayey in the intervals; there is little waste land; timber, white and black oaks of superior quality, red and white hickory, walnut, white and yellow poplar, maple, beech, &c.

It is divided into about twenty farms, mostly ranging from 100 to 150 acres; these are subdivided into 9 or 10 enclosures, (principally by "worm fence," some hedges of the Virginia thorn, *crataegus cordata*, but these are now being abandoned,) exclusive of woodlands and permanent meadows.

The rotation of crops almost universally pursued is: First year, corn on an old sod; 2nd, oats; 3rd, wheat; 4th, clover and timothy, mown or pastured; 5th hay, 6th hay; 7th, 8th, 9th, pasture.

The division of land, average products of crops and prices may be seen in the table annexed, the estimates of grain crops and prices are taken from actual memorandum, for the last ten years, on a farm of medium capacity. Prices embrace the low rates caused by commercial depression, 10 years since, and the high ones consequent upon the exportations of 1847. Wheat crops embrace two good crops, averaging 27 and 28 bushels, and two poor ones of 9 and 11 bushels, occasioned by winter-killing, Hessian fly and rust. Corn crops ranged from 20 bu., owing to the excessive drought of 1844, to 80 bu. Other items are from personal observation, and of course are only an approximation to the actual results, tho' I believe they are nearly correct.

Sufficient potatoes are intended to be raised to supply each family; the risk of disease prevents anything farther. They are generally planted in part of the oats field. Sweet potatoes and citron melons thrive and produce well, but are not much cultivated. Much attention is paid to raising a variety of garden vegetables for home use in their season; and, some to the smaller fruits, currants, gooseberries, raspberries, &c., but not a great deal given to pears, plums, cherries, peaches or grapes; buckwheat none; rye, little or none; roots for stock, turnips, Swedish or common, beets, carrots, &c., but little grown.

Durham stock of Whitaker's importations, has been introduced, and there are pure bred and grade animals of that and other crosses. Also, Southdown sheep, bred from Joseph Cope's importations; and the stallion Dilligence, bred from an imported Norman horse. Hugs, Berkshires receive no favor. The "Chester county" is universal. The following are the weights of several killed the past fall, at about 16 months old: 525, 518, 482, 424 lbs., although the average would be about 300 lbs.

Within half a century, and for one hundred years previously—for this district has been a strictly agricultural one since the days of Penn—and before the present alternation of crops, accompanied by sowing of artificial grains, and the application of lime and

plaster, the uplands, (after clearing off the timber) were cropped with grain as long as the crop was thought to pay for the labor, and then being considered as "worn out" and of little value, was either made common or added to the range of stock, which could barely pick a subsistence. All the hay for winter provender was gathered from natural or watered meadow banks. These were esteemed the farmer's sole dependence. Now, those waste uplands constitute some of our most productive lands, and continue increasing in fertility.

Percent of land.	Products.	No. of acres.	Average No. of the.	Amount raised.	Amount consumed.	Surplus.	Average price.
6	Corn	180	50	9,000	3,000	6,000	\$30 55 cts. per bu.
6	Wheat	180	35	6,300	2,100	4,200	35
6	Barley	180	18	3,240	1,080	2,160	75
2	Apples	60	20	1,200	3,000	1,800	10
20	Hay	600	100	60,000	20,000	40,000	\$12 to \$20
15	Pasture for horses, young stock, cows for farm use.	450	Horses, 55	Oxen, 60	Cows, 65	Horses, 60 Oxen, 80 Cows, 140	80 140 40
25	Pasture for feeding cattle, dairy cows & sheep.	750	Sheep, 300	Cows, 20	Sheep, 200	Sheep, 200 Cows, 20 Sheep, 20	\$18 40 20
25	Woodland	600	Shingles per thousand, 300 lbs.	Wood per cord, 1000 lbs.	Hickory, 3000 lbs.	Shingles, 3000 lbs. Hickory, 6000 lbs.	\$5 30 per cwt. 20 cts.
25	Timber and grass 6 to a farm.	3,000					

"Amount consumed" does not include grain fed to dairy cows or feeding stock, intended for market.

Number of horses, oxen and cows does not embrace young stock under four years of age.

Time delivered, costs per bushel, 15 cts. In general use.
Ground plaster, ton, \$6 50
Ghano, very little used, 50
Expense of taking corn to Wilmington, 5 cts. per bu.
oats to Philadelphia.

These "products" may severally claim attention hereafter.

C. B.

Birmingham, 3rd mo., 1853.

For the Farm Journal.

White Blackberry.

There has been a considerable stir lately among the horticulturists about a species of the *rubus villosus*, called the white blackberry. It is said to be very fine. Whether it is or not it really must be a curiosity among the tribe of dark berries. Can any readers of the Journal give a history of it, and where it can be obtained; as such information would be very acceptable to a subscriber.

J. C. B.

Dorningtown, Chester co.

For the Farm Journal.

Shanghai Fowls.

MESSRS. EDITORS:—

Will not your racy correspondent inform us how his remarkable "celestials" were kept? What number of the sixty or seventy common fowls produced the four dozen eggs in January? What were their ages and how kept, aside from ranging the barn and yard? Did no single individual equal the Yellow Shanghai?

Such isolated experiments, which it requires no clairvoyance to pronounce upon, are objectionable. Nothing but *fowl disease* could induce J. B. G. to put them forth. It was unnecessary for him to add that he "did not take the disease in the ordinary way," because his symptoms indicate a violence of attack very extraordinary, and which homeopathic doses of my *stuff* would not eradicate.

Permit me too to give experiments. Last Autumn a pair were purchased for the very moderate sum of two dollars, from a person whose opinion on all matters pertaining to improved stock is *ex cathedra*, and whose favorable opinion of this variety, induced him to perseverance for their introduction which was really heroic. From his representations corroborated by the books, my anxiety was aroused almost to *chicken fever*. He could supply but a single pen, consequently application was made to a friend for "a few more of the same sort." Four more were procured for which he charged me—nothing. You will perceive that all "ranks of the fancy" have not an eye single to the "almighty dollar," and cannot be accused of baiting.

All my common cocks were cut off i. e. their heads and with these six new "cracks," the race of improvement commenced. Now for the result, which like that of J. B. G. is admitted to be isolated and probably premature. These three hens, procured in November, have had the same treatment, with the exception of an occasional tit bit of meat and roast potatoes, with thirty of the common stock. Up to this time, they have produced twenty-five eggs, that is one egg in four days, or equal to an average of one per hen in twelve days.

The thirty have produced since the first of January, seven hundred and fifty eggs, that is ten per day, or one for every three hens. No account was kept in December, and if that month be added, we have an average of seven per day, nearly one per every four hens, far above the average of the improved "cracks." But I am well convinced from appearance of eggs, age of chickens, &c., that the seven hundred and fifty eggs were produced by half of the common hens, thereby doubling the average. A single individual produced fifteen eggs in eighteen days.

A friend on whose statements reliance can confidently be placed, informed me this day that from

his pen of Shanghais he reared last season only two, quite late it is true, but from the four up to this date THREE eggs have been obtained.

So long, Messrs. Editors, as you do not become too deeply indoctrinated in the mysteries of celestial chickendom, and are willing to publish, you shall have both sides of the question.

It was not the intention to ask the Rev. Mr. B., nor yet J. B. G. what was the remarkably good variety that was prominent enough—but the *unprolific*, that they might be avoided by farmers, &c.

J. K. E.

For the Farm Journal.

Brewers and Barley.

MR. EDITOR:—

I wonder if our Pennsylvania farmers have forgotten the circular of the Philadelphia Brewers, issued last Fall, inviting us to go largely into the cultivation of Barley, and thereby put into our pockets the half million of dollars annually sent to New York, to furnish these said brewers with their supplies. I had made up my mind to sow barley this Spring, when one of my neighbors gave me an account of his experience with the brewers last Winter, in the way of selling them his crop. He informed me that he had as fine a sample of Barley as could be grown in New York or elsewhere,—it was plump, bright and sound, weighing forty-nine pounds to the bushel. He took it to Philadelphia and offered it to some half a dozen of the brewing fraternity at seventy-five cents, which has been the average price in New York for several years past. But none of them would touch it,—some declined buying at any price, and one or two had the magnanimity to offer sixty cents! Completely out of patience with the whole craft, my neighbor left his sample with a friend and went home, well satisfied that the famous circular of these brewers was a regular piece of "gammon." By accident Mr. Rudman, of the "Eagle Brewery," in Green street, happened to meet with the sample, and at once offered seventy-five cents for the crop; and moreover, agreed to take next season all the Pennsylvania barley of equal quality that may be brought to him, at the same price. So much for the great circular that was issued with so much parade last Fall. Had it not been for the liberality of Mr. Rudman, my neighbor would have had his barley on his hands yet.

I have troubled you Mr. Editor with these hasty remarks just to let the farmers know where to take their barley when they seek a market for it in Philadelphia. And if they should want to take home with them a cask of ale that would make even an ultra testotular's mouth water, they would find the very article at Mr. R.'s establishment.

A BUCKS COUNTY FARMER.

For the Farm Journal.

The Wheat Fly, Again.

The following passages are extracted from a recent Letter from Dr. T. W. HARRIS, the author of the valuable work on the *Insects injurious to vegetation*, dated Cambridge, Mass., Feb. 12, 1853, to Dr. Wm. Darlington, of West Chester. Information from such high authority will, no doubt, be duly appreciated by our Agricultural friends.

"If you have ever looked over the Transactions of the Linnæan Society of London, you may remember to have seen the accounts, by Mr. Marsham and Mr. Kirby, of an insect injurious to the wheat crops in England, half a century ago. This insect was called *Tipula Tritici*, and is now referred to the genus *Cecidomyia*, and its common name is the *wheat-fly*. Twenty-five or more years ago, it reached this country; was first observed in the British Provinces; was found in the northern part of Vermont, on the borders of Lower Canada in 1828, and has gradually spread through New England and New York, and seems to be working its way southward and westward every year. The amount of damage done by it varies greatly in different years and places; and in some instances, it has nearly disappeared from places where it formerly prevailed. In its winged state, the insect is a minute fly or stingless gnat, much smaller than the Hessian fly, with orange-colored body and legs, transparent wings, and long bead-like antennæ. The time of the appearance of these flies varies, according to temperature and situation, from the beginning of June to the end of August; but the principal swarms appear in the wheat-fields in New England from the middle of June to the middle of July, at which time the flies lay their eggs within the chaffy scales of the grain. The eggs hatch in about eight days, and produce minute orange-colored maggots, which live on the pollen and on the soft substance of the grain while in the milk, extracting it from the base of the germ. In consequence of this depredation, the grains do not fill out plump, and are always more or less shriveled and defective. The maggots come to their full size in about fourteen days, when they cease feeding, and remain torpid for a few days, during which they cast their skins, which are delicate transparent films. After this, the greater part of the swarms, if the weather be sufficiently moist, descend to the ground and burrow under the surface, where they remain in a dormant state till spring, when they take the chrysalis form in the earth, and emerge from their retreats as flies in June and July. Late broods of the maggots are sometimes harvested with the grain and carried into the barn, where they will be found in the chaff and in the screenings of the grain. This is very likely to happen if the maggots have not come to their full growth, or if their descent to the earth has been retarded by dry weather. This seems to

have been the case with the specimens you have sent to me. The insects are in their dormant state; some have shed their skins; others have merely shaken themselves loose from their skins, without throwing them off."

"A detailed account of the history of this insect will be found in my Treatise on insects injurious to vegetation, a new edition of which has been recently printed; but the foregoing brief abstract embraces all the essential particulars. No remedies have been fully successful in arresting the ravages of this insect. It is highly important that the chaff, dust, and refuse straw, if found to contain the maggots, should be immediately *burnt*, so as to destroy the dormant maggots and prevent their change to flies. Crops have been saved from injury by sowing in the early part of the Autumn or late in the Spring. Spring-wheat has done better than winter-wheat, especially if sown (in New England) after the 15th or 20th of May. Other remedies have been tried, and of these see my book above named. †

* * * * *

"I have satisfied myself, on historical grounds, that all the species of *Cucurbita* are originally American. They were unknown in Europe before the discovery of the western continent. The two or three species, referred by botanists to *India*, are proved to be exotics there. They came from this *Western India*. Even *Cucurbita ovifera* turns out *not* to be a native of Astrachan. *Lerche* found it there only as a cultivated plant in the gardens, in company with Indian corn and Brazilian beans, all undoubtedly introduced directly or indirectly from America."

† In a subsequent letter, referring to this subject, Dr. H. says:—"I may not have sufficiently urged the importance of destroying the *larvæ* or maggots of the wheat-insect left in the chaff. It may be found expedient to reap the wheat early, or before the maggots have left the ears. The insects will then remain in the chaff, and dust after the grain is threshed and winnowed, with which they should be burnt. In this way a large proportion of the next year's swarm of flies will be destroyed. If this be neglected, and the maggots are left to descend from the grain in the field, or are scattered with the chaff and dust around the barn-yard, the ground will be well seeded for a plentiful crop of the insects in the following year."

For the Farm Journal.

Guenon on Milch Cows.

Since the publication of the last Journal, there has been several sales of cows within eight or ten miles of West Chester, and as your readers abroad may want to know what a good cow is worth here, (having the "Milk Mirror" perfect,) we will add the prices of two. One sold in Thornbury, Delaware county, brought \$60 50; another sold near Paoli, in Chester county, brought \$64 25. The above cows were well known and tried; the first one making ten or eleven pounds of butter a week all through the

Summer, and will not go dry, and within six weeks of calving, will make four pounds of butter. The second one (last season) with her first calf, made ten and a half pounds of butter the week she was tried; and at the sale was within a month or six weeks of calving, and was making four pounds a week then. Our reason for noticing the above cows is not so much to bring them before the public, but to prove the science of Guenon. Both these cows having the "Milk Mirror" nearly or quite perfect. I will also add, they were both York State cows, bought out of droves when heifers, for prices ranging from \$20 to \$30. The advantage of the science is this: It matters not what country or what breed a cow comes from, if she have the "Mirror" perfect, she will not deceive the owners' expectations; and also, it is not worth the trouble and expense of importing stock for milking purposes, when we have them at home, and can raise them to perfection by following the advice of Guenon and Neffin. We will close our remarks by asking a question. Will not the above prices pay for breeding perfect animals for milking purposes?

A.

For the Farm Journal.

MR. EDITOR;—

Perhaps at this peculiar period of hen roost celebrity, while the attention of farmers and house-holders is so urgently directed toward the improvement of their chickens, a woman may be permitted to give the result of her own experience, for the benefit of those unfortunate mortals who are unable to obtain the far-famed Shangai, or other imported crows and cacklers.

I have been nominal mistress to flocks of chickens during at least twenty summers, but for a great part of the time I left the management of the poultry yard to whoever was pleased to attend to it. And it was managed after this manner. The eggs were collected for eating, as long as the cool spring weather continued, and no hens permitted to set until May or June. Then the earliest chickens were eaten in the fall, and the late half grown ones, kept to perpetuate the stock. It is a popular belief that late chickens lay best in the spring. Well, our chickens deteriorated sensibly. They grew to be no larger than pheasants, and many of the young chicks were crippled, and unable to walk. We were always changing with our neighbors, not only crows, but hens and settings of eggs; all to no purpose. Finally I began to philosophize upon the subject. I always preserve the earliest setting of peas, beans, and other garden vegetables, for seed, and so improve my varieties; and I now resolved to try the same with my fowls. I observed that half grown chickens in the fall were only half grown chickens the next spring. So I commenced by "setting" my hens as early as they showed an inclination to hatch, and then select-

ing the largest and finest of the chickens, for my next summer's stock. (I also keep one crower for every five hens, and have no lame chicks.) Now I have as large, fine, hardy, and prolific fowls, as any reasonable woman can desire to possess; without the extra care and nursing, which is required by the imported breeds.

LYDIA JANE PEIRSON.

For the Farm Journal.

May I be permitted also to offer my observation upon the causes of the potato disease. You must observe that I have had opportunity of analyzing the quality of this famous esculent. My Mother (blessings on her) always used potatoe starch in her family, and this she manufactured herself. I was her eldest daughter, and my fingers knew the evils of contact with the grater, when they were scarcely larger than a rye straw, as I assisted at the annual starch making. Of course I follow my mother's example, and make every Autumn as much potatoe starch as I need for family purposes.

In the fall before the potatoe disease broke out in this vicinity, I was surprised at the small quantity of starch obtained by my usual process, from the usual measure of potatoes. I thought it must be left in the dregs, and accordingly washed and strained them a second time, but obtained nothing. So it has been ever since. Now, I presume that this paucity of farina, which leaves the potatoe watery, and soft, is the true reason of the decay or rot; and that any process of cultivating or manuring, which would so regulate the chemical action and affinities, as to give the potatoe its requisite quantity of farinaceous matter, would regenerate this valuable article of food.

My opinion is not a mere vagary, for we always devote a part of the garden to potatoes, for early use, so that I have an opportunity to watch them, and to try and observe every suggested experiment, for preventing or checking the disease, as well as of observing the various indications of its existence and progress. And I am well convinced that many of the appearances which have been deemed *causes* of the disease, are merely effects, some of them sectional and some accidental.

Will scientific farmers please give my opinion a "trial by jury," before they condemn it?

LYDIA JANE PEIRSON.

For the Farm Journal.

Experiment with Guano.

In July, 1850, I sowed a field of $2\frac{3}{4}$ acres with buckwheat. Of this, two acres was sown with guano, about 90 lbs. to the acre; the remaining $\frac{1}{4}$ of an acre had no manure of any kind. We harvested and thrashed in October, and from the two acres sowed with guano we had 51 bushels of good plump grain; and from the $\frac{1}{4}$ of an acre not guanoed, we had $2\frac{1}{4}$

bushels of poor, shrunk, good-for-nothing. The following is a statement of the cost and yield of each acre:

GUANO—51 bus. buckwheat at 50 cts per bu.,	\$25 50
180 lbs. of guano at 3 cts. per lb.,	5 40
Balanced in favor of guano	\$20 10
No GUANO—2 $\frac{3}{4}$ bus. B. Wheat at 40 cts per bu.,	\$1 10
“ “ yielded per acre	\$ 1 46 $\frac{3}{4}$
With “ “ “ “	10 05
Balance per acre in favor of guano,	\$8 58 $\frac{1}{2}$
A YOUNG FARMER.	

For the Farm Journal.

Corn Fertilizer.

As the time is drawing near for planting Corn, I consider it very important that Farmers should be acquainted with the best mode of preparing seed corn for planting. The mode I have practised for several years, with great success, is, immediately before depositing the seed in the ground, to mix two quarts of soft soap with half a bushel of seed corn; after that is done, put a good supply of Plaster with the above, and mix well together. Plant the corn with as little delay as possible afterwards.

GEO. WALKER.

West Chester, March 23, 1853.

The Strawberry Question--Hovey's Seedling.

The following communication was read at the late meeting of the Pennsylvania Horticultural Society: TO THE PENNSYLVANIA HORTICULTURAL SOCIETY:

In accordance with a suggestion of the society, expressed in one of its regulations, that "notices of peculiarities in culture, management, &c., of the objects are most desirable," I make a few remarks on the sexual characters of the plants of Hovey's Strawberry, I have exhibited this evening.

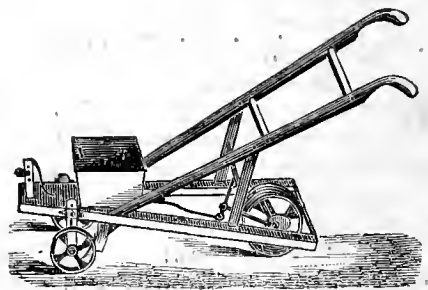
This variety is usually classed as a pistillate, and considered worthless when not planted in the neighborhood of a staminate kind. I find by repeated observations, made while forcing them, that they become a staminate by being forced slowly, in a moderate temperature; at the same time an abundance of light, and a regular supply of moisture—conditions well known as essential to a healthy luxuriousness of the strawberry. On the other hand, I find that whatever tends to check that luxuriance has a tendency to produce the pistillate form. In the specimens before you, one very weak from over watering and deficient drainage, is a pistillate; another, a very weak plant and forced rapidly, has the anthers, very nearly abortive; while the other plant which has been in the forcing house since the middle of January, and in circumstances every way favorable to their healthy development, are as perfect as possible.

Last season a number of plants, started in a temperature of 65 deg., and ripened in one of 75 to 80 deg., produced all pistillates. Twelve runners from these plants were selected, potted in small pots, and ultimately treated as other plants for forcing. Seven of the strongest of these produced stuminate flowers and the other five pistillate, like their parent plants. Another set of 100 pots, last season, produced all pistillates. A similar set, forced easily this season, produced all but the weakest plants, perfect. It has been doubted whether the Alice Maude, in many collections, is correctly so, and it has been suggested that the growers should observe whether their plants are pistillates or staminates, in order to decide. I have submitted the above observations to you, hoping they may have a practical bearing on that question by showing the distinction between pistillates and staminates to be worthless—cultivation producing either the one or the other.

THOMAS MEEHAN.

The Metropolitan Exhibition.

At the Metropolitan Exhibition, which closed a short time since at Washington, D. C., we notice that Chester county came in for a share of the honors. The Messrs. Pennock, of Kennett Square, received the first premium for their new Slide Grain Drill. Three other Drills were exhibited—Hunt's, Gatchell's and Urmy's. Messrs. Lee, Pierce & Lee, of this county, whose Drill is in deservedly high repute wherever known, were not represented at this Exhibition.



NEW CORN PLANTER.

The above cut represents a new and improved Corn Planter, recently patented by S. & M. Pennock, of Kennett Square, in this county. Remarkably simple in its construction—having neither Cog-wheel, nor fixing of any kind, that can possibly get out of order—this Drill must soon work its way into favor with farmers. It is so constructed as to drop four to six grains to the hill, three feet apart, or one to three grains eighteen inches apart; covers them the proper depth and presses down the earth with a roller. A set of steel teeth accompany the Drill, when desired, so that by removing the planting arrangement, it may be converted into a Cultivator. This Drill, we

understand, was thoroughly tested last spring by several farmers in this county, and gave general satisfaction. They are for sale at the 'Agricultural' Warehouse in this Borough. See advertisement.

Tribute to George Renick,

I do not propose to give an extended biography of the individual whose name heads this article, nor to narrate many of the incidents of his life. My only object is to speak of one or two of his prominent acts, which will suffice to show that a plain, unassuming, unambitious farmer, may confer great benefit on his country. There is nothing grandiloquent in a farmer's life. On the contrary, how calm the inception, how gradual the expansion of the cultivator's designs! For him there is no sudden realization of hopes. In silent thoughtfulness he prepares the ground—in his mind, deep ploughing and careful harrowing produce fruitfulness. From the budding to the ripening of his mental growth, his mind goes straight onward to its conclusion. But on account of this slowness of development, this leaning on and learning from Nature, he has sometimes been called a dull, plodding drudge.

To the young husbandman just setting out in life, I might say, behold in GEORGE RENICK your model. Learn from him that a fruitful intellect may dwell with modesty and merit. And if you would be riveted in attachment to the noblest and most ancient of avocations, be assured from his history, that content and plenty will ever be the reward of him who assiduously cultivates both the soil and the mind. Such a farmer is above and beyond the feverish itchings for fame and notoriety.

In the winter of 1804—5, before turnpikes and canals afforded an outlet for the vast grain surplus of the rich bottoms and plains of the West, the prospects of the farmer were gloomy and unpromising in the extreme. Hogs roamed at large, and fattened without the care or solicitude of their owners, on the superabundant waste of the forest. The small villages of the thinly settled country, could scarcely consume the beef which one good farm was able to supply. And if every log cabin in the country had been a distillery, and every man, woman and child had drank their own home made whiskey like mother's milk, they could not have consumed the products of their groaning corn fields. The nominal value of that bane or blessing of man, as it happened to be in a liquid or solid state, varied from ten to six cents per bushel. At this juncture Mr. Renick determined to make an experiment, which his friends and relations deemed little better than burning his corn in the field.

Unmoved, however, by their doubts, he fed a lot of cattle, and started them on an untried road, to a market beyond the mountains. How long it would take, or how they were to be fed on the way, or in what condition they would reach their destination, no man knew. As the first fifty cattle ever fed on the Sciota, or in the great valley of the Mississippi, were turned out of the pasture, one of his commiserating friends shook his head, and said, "There goes poor George's forlorn hope." Forlorn hope it was, but a glorious victory perched upon its banner. The undertaking seemed desperate, but was eminently successful. To make his triumph the more complete, his trial was the more severe. When they reached Baltimore, he was no longer surrounded by friends who spoke their fears in whispers. To the inexperienced eye, the cattle were sore, hollow and poor.

No one would buy. The butchers scouted his offers to sell, even at reduced prices.

With that patient and quiet courage which has ever marked the man, Mr. Renick ordered two or three of the most indifferent of the cattle to be slaughtered, at his own expense, and the butcher was directed to give the meat to his customers, if he could not sell it at his stall. A fact was made known, and a valuable lesson was taught to the butcher and consumer. That meat was "the best for its looks they ever saw." The lot was sold; another and another followed. Now, all is plain and easy. "Any one could have done that." So thought and said thousands who have followed Columbus to the New World. Nor was there any mystery in making the egg stand up, after the great discoverer had showed them how to crush the end. The "forlorn hope" was the pioneer band to hundreds of thousands of fat cattle, which have gone from the Great West to the markets of Baltimore, Philadelphia, New York and Boston, and to be shipped from their ports to the far distant isles of the ocean. It has been computed, that not less than twenty thousand fat cattle, per annum, cross the Sciota river, between the town of Piketon and the mouth of Darby. North and south of those points, the numbers, eastward bound, have not been included in the reckoning. Has not Mr. Renick opened a mine of wealth to the feeders and farmers of the whole western world, and at the same time secured to our eastern brethren a constant supply of a great necessary of life?

This was not the only useful and striking example of that amiable and virtuous citizen. About thirty years after he had shown his brother farmers how to get their corn to market, after he had practically demonstrated that thousands of cattle, and countless thousands of hogs, could be fattened and driven where there was the greatest demand for them, he presented to the agricultural society of this county a certificate, signed by gentlemen of the highest character for veracity, that he had produced 154½ bushels of corn on an acre of ground. I know that this achievement has been since equalled and surpassed, but I mention it here, because it was the first time, I believe, that the well attested proof of so large a yield had ever been made public, and because this wonderful product was upon the very ground on which, so long a time previous, he had fed his "forlorn hope."

The Hon. John L. Taylor states, in his communication to the Plough, the Loom and the Anvil, that on the 2nd November, 1833, Gov. Allen Trimble, George Renick, and General Duncan McArthur, with others, formed the "Ohio Company for Importing English Cattle." Now, sir, believing that none of the gentlemen engaged in that noble enterprise, will be lessened in public esteem by my doing so, I will state the facts and circumstances which called that company into being. On that day the gentlemen just mentioned had been examining a lot of Kentucky Durhams, descendants of the importation of 1817, when Mr. Renick asked his companions why they could not form a company, and send on to England and bring out a lot of improved Durhams for themselves? He said, truly, "We know nothing of the purity of this stock; the pedigrees may or may not be made up for the occasion." The suggestion was approved, and that very day the articles of association, forming the first Ohio Importation Company were signed. What has been the result? Ask all who have attended to our Valley or State fairs. Not only has there been no deterioration, but in the opinion of one of the best judges in America, Dr. Arthur

Watts, "he saw nothing superior to them in all Great Britain," when he was examining their stock as agent of the third and last company, formed in 1852. In some respects, as I understand from him, the pure descendants of the first and second importations, are ahead of any thing he saw on the Empire Island. In every effort to improve our cattle, Mr. Renick has taken a leading part. There is an old adage, "Let honor be rendered to whom honor is due." It would give me unfeigned pleasure to see this rule applied justly and fully to him. I think it would have a wholesome, an encouraging effect upon the rising agricultural generation. There is no society, State or National, which would not do honor to itself by passing the highest encomiums, or offering the highest rewards, for actions and services which have been of such general and unrestricted good. The experiment can never be repeated, but the effect is for all time. His peaceful and quiet home needs no music from the trumpet of fame to make it more happy; but it that class which he represents, wishes to attain and maintain the first position in society, let them acknowledge and appreciate his good example. If I shall have caused, by this communication, the young sons of the soil to esteem and value the character of the modest and amiable old South Branch Patriarch, GEORGE RENICK, of Ross county, Ohio, I shall be amply compensated.

W. MARSHALL ANDERSON,

Chillicothe, December 9, 1852—Country Gentleman.

Tree Planters and Nurserymen.

There is one point about nursery trees, that gives rise occasionally to considerable discussion between the buyers and sellers, and it has occurred to us that it might be well to offer a few remarks on it at this time. We allude to the dissatisfaction and disappointment that purchasers experience on receiving from the nursery trees of a somewhat crooked or irregular growth, or of smaller size than they had expected. We are very well aware that it is not a little aggravating to receive trees of four feet in height instead of six or eight, as expected; or to get them with stems curved and twisted in half a dozen different ways, instead of being as straight as a gun barrel. To the amateur who intends to make but a small plantation, and desires every tree to be a model, this is particularly provoking; and in his trouble, unless he be as patient as Job, he reproaches the poor nurseryman most severely. Now we are not about to plead the case of the nurserymen; they must take care of themselves. They are, we know very well, often much to blame, and deserve reproach; but they are not unfrequently censured without good reason; and if those who purchase trees would study beforehand the characters of the varieties selected, as to growth, they would not so often be disappointed.

Now we will suppose, for instance, that Mr. A. orders from his nurseryman a dozen apple trees, as follows:—*Early Joe*, *Summer Rose*, *American Summer Parnain*, *Fall Pippin*, *Gravenstein*, *Porter*, *Baldwin*, *Fameuse*, *Northern Spy*, *Newtown Pippin*, *Melon*, and *Red Canada*; and that these trees are to be, we will say, three years old from the bud or graft. We would find that the *Gravenstein*, *Baldwin*, *Fall Pippin*, *Fameuse*, and *Northern Spy*, which are strong, rapid growers; are large, thrifty, beautiful trees; while the others, which are remarkably slow growers, are not more than half as large, and will be pronounced small, scrubby, stunted things, not fit to be seen, much less planted. A *Baldwin*, *Gravenstein*, or *Northern Spy*, will be larger in the same soil and un-

der the same culture, in three years, than a *Red Canada* or *Newton Pippin* in five; and at any size, their stout shoots, straight trunk, and smooth, clean bark, are pleasing to the eye; while the slender, twiggy, rough-barked trees, are just the reverse. These considerations should be taken into account. The nurseryman is paid no more for the slow growers than he is for the rapid growers, and it is not reasonable to expect them so large or so vigorous looking. Then there are varieties, such as the *R. I. Greening* and *Fall Pippin*, of irregular growth, with very seldom a straight stem, that it is quite unreasonable to expect as symmetrical as a *Baldwin* or a *Northern Spy*.

If we turn to pears, we find these remarks equally applicable. If Mr. A. will order from his nurseryman the *Bartlett*, *Seckell*, *Buffum*, *Duchesse d'Angouleme*, *Marie Louise*, and *Winter Nelis*, he will find a marked, and perhaps to him a very disagreeable contrast in their size and form. The *Buffum* and *Duchesse* may be eight feet high, thrifty, and smooth as young willows; the *Bartlett* not over five feet, and the *Seckell* four; while the *Marie Louise* and *Winter Nelis* will not only be small, but twisted into the most fantastic and untree-like shapes. Looking at the *Buffum* and the *Duchesse*, he will at once say, "Now these are what I call trees—just what I wanted; but these," turning to poor *Marie Louise* and *Winter Nelis*, "these are horrible." The nurseryman, who perhaps searched up and down every row in his nursery to get the straightest and best ones to please Mr. A., who is very nice, is sure to get not less than two pages of a scold; and not only that, he must lose a part of his bill and ever after the trade of one whom he hoped would be a good customer.

Turn again to cherries, and we find the same sources of disappointment. Mr. A. wants half a dozen cherry trees—tall, handsome, well-shaped trees, of uniform size and shape; as he intends them for ornament as well as fruit. Well, he orders *Black Tartarian*, *Yellow Spanish*, *Napoleon Bigarreau*, *May Duke*, *Belle de Choisy*, and *Belle Magnifique*—all first-rate cherries; but unfortunately, when they are received, the *Belle de Choisy* and *Magnifique* are mere dwarfs beside the majestic *Black Tartarians* and *Napoleons*. He then regrets he ordered them, and blames the nurseryman for not knowing better than to send them.

So with plums. No one need expect to get *Green Gages* and *Jeffersons* of uniform size with *Imperial Gages*, *Smith's Orleans*, or *Magnum Bonums*. If they do, they will generally be disappointed.

Those who regard the size and shape of their trees as of the first importance, must not be very tenacious about varieties; and, on the contrary, those who place quality first, must be less difficult to please as to size and form. The reasons are obvious. There are certain requisites, however, which purchasers have a right to demand from the nurseryman under all circumstances. These are—1st, That trees be sound and thrifty, stout in proportion to their height, and supplied with an abundance of healthy, unmutated roots. 2d, That the varieties be genuine. 3d, That they be packed and prepared for transportation with the greatest possible care and skill. The purchaser who fixes his mind upon mere size, forgetful of these, stands in his own light; and will, if he lives long enough, find out his mistake.

Would it not be well for nurserymen to indicate, or arrange in separate classes, slow growers and those of a very irregular or crooked growth?

We throw out these hints for the purpose of drawing attention to a matter that, as long as we can

remember, has been productive of disappointment and no little unpleasant feeling, that might just as well be avoided.—*Genesee Farmer.*

Improvement of Poultry.

The English Dorking, Cochon China and Shanghai.

While most other interests involved in the circle of domestic economy, have, for a few years past, been consulted and improved, the subject of poultry has, until lately, been wholly neglected. The thought that fowls of a larger size, finer forms, more beautiful plumage, and of better habits and character could be cultivated, seems not to have entered the mind of the farmer. The familiarity of this interest, together with its universality, has wholly clouded the idea of its importance. Every poor man, able to hire a room sufficient to shelter himself, his wife and his stove, has kept his half dozen fowls. And the able farmer with his five scores, has hardly once thought of the beauty and utility of uniform color, larger size and better character.

That there has been room for great improvement in the native fowls of this country, and that the introduction of foreign breeds has already accomplished much improvement is not to be disputed. But it cannot be conceded that everything that is foreign, is from that cause alone, superior and excellent. I see not why a breed of fowls, as large as a turkey, should be less expensive to keep than the turkey, or should be more profitable, or in every respect preferable to the turkey. Why then should breeds of an enormous size be sought after?

The English Dorking, either white, or rich buff, or fawn color, well shaped, hardy, domestic, and weighing, at twelve months old, four to six pounds dressed, is a desirable fowl. But in some respects the Chinese varieties are an improvement upon this breed. The Shanghai and Cochon China, which are the best of these varieties, are generally rather larger than the Dorking, and more plump and beautiful in form. If not more costly to keep, and equally hardy and prolific, they would be the preferable fowl. So far as my experience extends, (and I have kept both kinds during summer and winter,) I have imagined no difference in the productiveness of either, or in the expense of sustaining them. Although I would not relinquish the culture of the Dorking, still I esteem the Chinese bird, all things considered, the "ne plus ultra" of domestic fowls.

A cross of the select Dorking hen, with the Shanghai or Cochon China cock, produces a most excellent fowl. The China, being a tropical bird, does not fledge as speedily, nor reach maturity as soon as the Dorking, which is a native of a higher latitude. This cross, therefore, while it somewhat increases the size of the Dorking, and improves its form, expedites also the maturity of the Shanghai. A bird of this cross will be full fledged in about half the time of a full blood China. But the pure China is still the more beautiful bird.

There is altogether an erroneous impression extensively entertained, in regard to the necessity of feathered legs, to the purity of the blood of the Chinese fowl. The fact of feathered legs, in the varieties of both Cochon China and Shanghai, has nothing to do with the purity of the blood of either. In their native country they are both clean limbed and feathered, and bear the same name, as I am assured by a gentleman who has cultivated both, and imported them, for his own private use and gratification. Feathered limbs, as a curious and singular feature of the bird, may perhaps please for a short time.

And to the man of fancy, whose "henery" is swept and garnished, may do well enough. But to the every day man, whose fowls have access to the barn yard, the cow pen and the floor of the porkers, these feathered appendages must be any thing else than desirable, in muddy, wet and freezing weather. Like the honey bee, their legs would soon be heavily loaded, but with a freight of rather a different character. The freer from feathers on the legs, therefore, the more desirable would they be for the farmer's use. The leading shades of color of the Cochon China, seem to be buff, orange or yellow. Of the Shanghai, the same, and also a brownish yellow, fringed with black, often very beautiful—while the cocks of both varieties carry extremely rich, high colors. The Dorking, the Cochon China and the Shanghai, notwithstanding the ridicule to which the latter have been at times subjected, are probably as near the standard of excellence, for all the purposes for which they are designed, as we can reasonably expect or desire.—*Wool Grower.*

Mexican Wild Potatoes.

PROF. MAPES—Dear Sir:—The article in the Dec. No. of the *Farmer*, in reference to a new kind of Potatoe introduced into France from Mexico, reminds me of an intention which I have for some time had, to describe, for the benefit of your readers, a new potato which has been raised by Mr. A. HALE, of Alloway, in this county, for four years. The potatoes were brought from Mexico by a returned soldier, and had been planted one year in this country. Mr. HALE procured four potatoes, which were about the size and length of a man's thumb—skin thin, white, eyes shallow, and flesh very white. These were carefully divided and planted, and produced as follows:

YEAR.	SEED PLANTED.	PRODUCT.
1849.	4 potatoes.	$\frac{1}{2}$ bushel.
1850.	$\frac{1}{2}$ bushel.	29 "
1851.	24 "	350 "

They were offered in market last spring, and sold readily at all prices—some at \$10 per bushel, and some at 25 cents each. Being thus disseminated, we can better judge of what they will produce in general cultivation, and I have asked many farmers in reference to the yield. All have been planted, so far as I have learned, without manure, except one lot, and most of them on sandy loam. The products are as follows:

Messrs. ROYS & SCHOONOVER raised 100 bu. from 2 bu.	
Mr. HOFMAN	" 57 " " 1 $\frac{1}{2}$ "
Mr. BRAYDEN	" 30 " " $\frac{1}{2}$ "
JOSEPH FELLERS	" 13 " " $\frac{1}{2}$ "
The smallest yield was	18 " " 1 "

Mr. Hale informs me that they have increased in size every year, and many are now six inches long, and some which I saw at the State Fair at Utica I should think were seven inches, for which the owner refused 12 $\frac{1}{2}$ cents each.

They have been dug early and late, kept in cellars and in banks, and show no disposition to rot. When cooked they are pearly white, mealy, and in season whenever mature. Their form fits them particularly for baking; and when properly baked they have no rival that I have ever eaten. Steaming is the best method of cooking. When boiled, care must be taken not to overcook them. The first time my hired girl cooked them, I cautioned her not to overboil them. She seemed a little riled, and replied, "Indade, will ye be after teaching a paddy how to cook praties? When they came on the table they were

cooked, potatoes water and all, into very good *mush*. But a very little care will prevent this; and then you have a luxury in a potato. Should they prove in other localities to be as free from rot, as productive and as delicious as they have done in this region, they will form a very valuable addition to the potato crop.

While most other crops in the U. S. have increased since the census of 1840, the potato crop has diminished. This is owing to the rot. In 1840 the product was 108,298,060 bushels; in 1850, 104,055,989; of these, 38,259,196 were sweet. If a variety can be found which will not rot, this amount will be doubled in the next ten years, and we shall then raise 200,000,000 bushels—only one-third the crop in importance in the United States.

The variety introduced into France from Mexico was yellow inside, while this is white. This may arise from the two kinds having been procured from different localities, for the following extract from the report of the Hon. Mr. KENNEDY, Superintendent of the Census, shows that they grow wild in many places:—"It has been found in an indigenous state in Chili, on the mountains near Valparaiso and Mendoza; also near Montevideo, Lima, Quito, as well as Santa Fe de Bogota, and more recently in Mexico, on the flanks of Orizaba."—*Working Farmer*.

LYONS, N. Y., Dec., 1852. E. W. SYLVESTER.

Agriculture in California.

On the 7th of last October, a large agricultural fair was held at Sacramento, which was quite an affair. An address was on that occasion delivered by Dr. John F. Morse, in which he made the following statements relative to farms of different gentlemen. He said that, on the garden of Mr. Bennett, numbering 30 acres, were raised 60 bushels of grain per acre. He employs 10 men, and realizes \$595 weekly. The garden of Messrs. Smith & Barber, numbering 30 acres yields \$60 a day.

Mr. Southwick, on his farm, keeps 125 cows, at a cost of \$600 per month. He sells 176 gallons of milk daily, at \$1 per gallon. He realizes \$63,000 annually from his dairy alone. Gen. Hutchinson, on 80 acres, realizes 50 bushels of wheat per acre, which weighed 52 pounds to the bushel, and was worth \$91.54.

William H. Davis, on a farm of 600 acres, keeps 2,000 head of stock. J. M. Horn, of San Rose Valley, has a farm of 200 acres, which produces 80 bushels of barley to the acre; also, 150 acres of potatoes, producing 300 bushels per acre. They are worth \$4 per bushel; besides large crops of wheat and oats.

Mr. E. S. Beard, of the same Valley, has 540 acres in barley, wheat and oats, yielding on an average, 50 bushels per acre. Also, 260 acres of potatoes, yielding 250 bushels per acre. Aggregate amount in value, \$260,000.

At a late meeting of the Farmers' Club in this city (N. Y.) Mr. Shelton, of California, stated that Indian corn did not generally flourish in California. It grew to an enormous height with small crops, from 20 to 25 feet high, at least. The climate is exceedingly changeable. Mr. S. said that he saw some Canada corn four to six feet high, the ears being near the ground. The westerly winds rush in at San Francisco, and rarify the hot air in the valley where stands the city. The branches of trees are all bent to the eastward. Various trees are so injured by wind and sand that they become stunted and grow up in a bush form. As soon as the rainy sea-

son begins, clover commences to grow and grows very bushy and tender. The Indian squaws gather baskets full, every day, making a kind of beverage of it. The hills and valleys are covered with wild oats and clover. The cattle and stock get very fat on these oats and clover. The clover comprises some fifteen or twenty varieties of every hue and color. The grasses are very fine; the native timothy yields from two to five tons per acre. It is ten feet high. The pin grass is of a very curious growth. An acid clover grows very abundant in the valleys; the natives made a lemonade of it; it is very healthy. He gathered one bushel of sour clover weighing 3 lbs.

The Rev. Mr. Fileh, of California, stated that vegetation began in November, and dried up in June. Drought continues till November, and generally without dew. The people commence cutting barley about the last of May, and let it lay on the ground over two months, not raked up.—*Scientific American*.

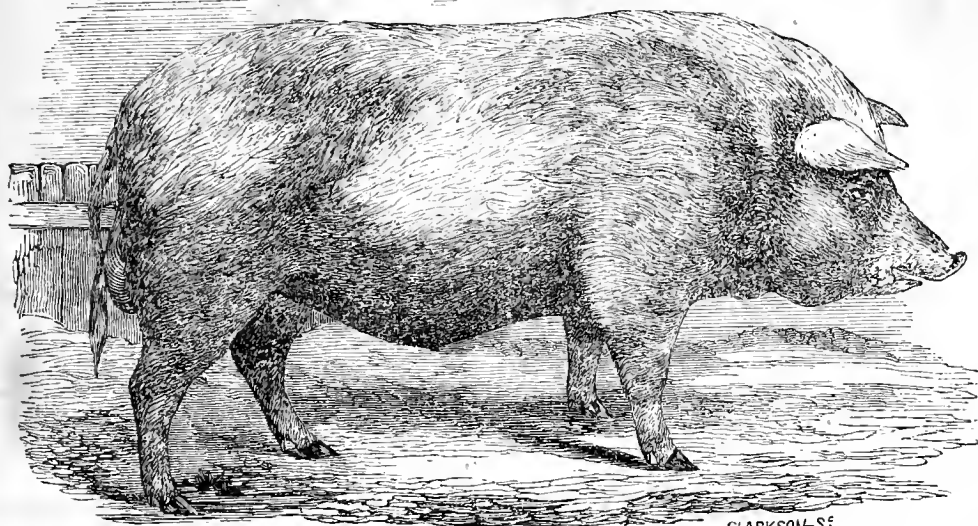
Osier Willow.

The Osier Willow is getting to be extensively used in this country for baskets, cradles, children's wagon bodies, and other purposes. We believe it is mostly imported from Europe; it grows finely, however, in this country, and we see no reason why it should not be cultivated sufficiently to supply the home demand. It is grown at Colton's nursery, New York. At a late meeting of the New York Farmer's Club, we learn by the New York Tribune, that the following remarks on the culture and commercial value of this article were made by George Dickey.

The Osier Willow for basket making—price in New York from 3½ to 8 cents per pound, is imported from France and Germany, but chiefly from France. England grows all she uses. There is a considerable quantity grown on Staten Island, near Richmond, which brings about five cents per pound on the average when prepared for use. It is planted in small sized twigs by the acre, in damp soil, leaving some pathways between, and it is necessary to keep the ground clean and clear of the growing of weeds and other plants. It will grow in soil unfit for other purposes; it will not grow well on light or sandy soil. The bark is taken off by a triangular instrument which catches the twigs that are drawn through it, the prongs of the instrument being made round and arranged to press hard on the twigs as they are pulled through the machinery, the prongs of which are made of iron.

A RECEIPT FOR THE BLIND STAGGERS IN HOGS.—A correspondent of the Michigan Farmer, directs, as a remedy for this disease, to bleed them in the third wrinkle in the roof of the mouth. My practice is to throw the hog on the back and cut across the wrinkles, and I have never had a case that did not effect a cure. J. B.

GIRDLED TREES.—A correspondent of the Genessee Farmer says that girdled trees may be preserved by the following: Take out a block of wood extending above and below the girdle, and take from the body or limb of another tree a block corresponding in size and shape, with the bark on, and adjust it in the place, and bind it there, on the principle of engrafting. This plan, it is said, has proved successful.



Chester County Hog.

The above Engraving is from a daguerreotype likeness of a fine boar of the Chester county breed, bred and owned by A. Bolmar, West Chester. Owing to the position he stood in at the moment, his back appears somewhat hollow, more than it really is. In other respects the likeness is good. He is a large animal, and would weigh four or five hundred, and measures from his nose to the root of the tail, five feet six inches, and five feet one inch around the girth. His descendants have gone to various parts of the Union, and have helped to increase the reputation of Chester county hogs for large size, combined with very neat form, comparatively small offal, great depth and length of carcass, and easy fattening. In these particulars, this breed is unsurpassed. A considerable number have been slaughtered the past winter, weighing over five hundred. They are emphatically the farmers hog, yielding a large amount of lard. Some of our farmers who manufacture sausage on a large scale, find there is rather much of this for their purposes, and are enquiring in some places for Berkshires, in whom there is a greater preponderance of lean meat.

The specimen before us is represented frothing at the mouth, his way of showing a little honest indignation at the process of the age, which requires him to stand up for the daguerreotypist to copy, a process his ancestors were not subjected to.

As the Chester county breed of hogs is now so widely known and esteemed, we have endeavored to

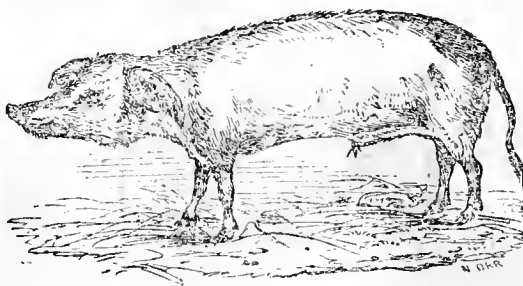
ascertain their origin, and by whom introduced into our country. It appears from what we can learn, that the credit is due to Capt. James Jefferis, who occupied a farm on the forks of Brandywine, a few miles from West Chester, after retiring from the sea. His ship used to trade between Liverpool and Wilmington, Delaware, and in one of his voyages, he procured a couple of hogs from Bedfordshire, with the view of introducing them into this county.-- This was about thirty-five years ago. They were then called the Bedford breed, and have been recognized by Englishmen, who were familiar with them about that time in Bedfordshire. At present the breed of hogs there is not so *distinct*, but has been crossed more or less with others. From this origin they have been generally distributed in our own and surrounding counties, and are now known as the Chester County Breed. They are pure white.

Those who wish to see them in perfection, can do so by visiting the piggery of A. Bolmar, which now contains about sixty, and shows what can be done with them in comfortable quarters and systematic management. The piggery is one hundred and four feet long, with a steaming house at one end for boiling and steaming food, and divided by board divisions into seven different compartments. These are all paved with brick, and regularly cleaned, having suitable drainage.

Improved breeds of swine are as important to the interests of the farmer as improved breeds of other stock, the object being in both to make a given

amount of food produce the greatest profit. They are equally worthy the attention of the scientific breeder and manager. As an evidence of what has been attained already, we subjoin by way of comparison, a portrait of the old unimproved breed of hogs, which

have been replaced here by the Chester county. We know of none of this stripe left in these diggings, and had to send to our friend Solon Robinson, to procure us a portrait of some of those about New York.



WORK FOR THE MONTH.

FARM.—Read over directions of last month, and attend to what was omitted. Sow oats as soon as the ground is in order; harrow thoroughly and then roll. Pass roller over mowing fields.

Top-dress winter grain not previously manured, with short manure or Guano and Plaster.

Plough for corn, and subsoil before ground becomes too dry. Much of the success of the crop, depends on good ploughing and preparation of ground. Avoid such ploughs, as turn up and leave a smooth, glazed and unbroken furrow. The sun often hardens such, into lumps, impervious to harrow. Fine pulverization of soil is of great importance. We have found Prouty's & Rogers' ploughs, to plough and pulverise at the same time; open seams and cracks in the furrow, which admit air, and greatly aid the subsequent operation of the harrow. Spread manure or Guano previous to ploughing. No advantage in planting corn in this section before second week in next month, but the ground should be often stirred previously. Plant Potatoes for early crop. Plough and prepare for root crops. Also for sowing corn for fodder; read article on this in last volume of Journal, page 325.

Give particular attention to stock. After being well cared for all winter, they often fall off in last month before pasture. Ewes and Lambs should have allowance of grain and roots and good hay, daily turned out in fine weather, on a pasture lot reserved for the purpose. Continue or increase allowance of meal and roots to Fresh Cows. It is an old saying that stock well wintered, are half summered. They should go out to grass in good order. There is never any profit in keeping stock *below the thriving point*. To merely keep them alive will not pay.

Do not turn out stock to grass too early. Feed well all working cattle, both oxen and horses. Cut hay is of great advantage, as it economises time, and gives animals more time to rest, between working

hours. It takes them less time to eat and is easier digested.

Give all animals daily access to salt.

FRUIT ORCHARD.—Planting trees may still be done this month, and in doing so, cut off all bruised and broken roots; make the cut from the lower part, so that the cut surface may be down.

Head in by cutting off the ends of branches of large trees.

See to peach trees that the worm is not at work. If the earth was removed from the body of the trees last fall, put a shovel-full or two of wood-ashes around each tree, and return the earth that was taken away. Quince trees should be dug around and well manured; we have found that salt scattered under them answers an excellent purpose in producing fair fruit. Gooseberries, currants and grape vines 2 year old, from cuttings should not be transplanted in places; in digging the holes, make them large and deep, filling in what was before occupied with subsoil, with surface loam, leaving the subsoil on the top to become improved by the contact of sun and air. These should be heavily manured, as the gooseberry and currant are rank feeders. All transplanted trees should be mulched by putting around the roots, manure hay or straw. Grafting of apple and pear may still be continued, if the grafts were cut in season and properly taken care of till the leaves begin to expand. Cherries, plums and peaches should have been done last month. Remove all insects from trees, and apply wash before recommended, and remember that trees need cultivation.

VEGETABLE GARDEN.—This is an important month in the garden. Finish planting out esculents for seed, and at a distance from others of the same genus. All kinds of seed may usually be planted this month, reserving such as are tender of frost till the last. Make plantations of asparagus. Plant out rhubarb, horse-radish and onion-sets; also seed for next year's pips. Sow peas, radishes, lettuce, every few days for a succession. Plant out cabbages, cauliflower

and lettuce from cold frames. Plant Lima beans, cucumbers and melons in pots, under frames or in inverted sods, to set out when weather is settled. Transplant medicinal herbs, and sow seeds of more. Keep ground hoed and stirred and free from weeds. 500 lbs. of guano to the acre has been found equal to ordinary dressing of manure for vegetable growing.

FLOWER GARDEN.—Continue the directions given last month, all such work as pruning Roses, and flowering Shrubs, Hoysuckles and Creepers of all kinds, laying sod, planting box edging, transplanting herbaceous plants, manuring and digging the flower beds, should be concluded this month. Continue to plant Evergreens, and all kinds of *shrubbery*. In the rage which *exists* for ever blooming plants, some of the Brightest Gems of the Flower Garden seems to be thrown completely in the shade, we would gladly lend a hand to bring them into the sunshine, (especially Wiegilia Rosea, Forsythia Veredissimia, Spirea, Revesii do Prunifolia,) for this reason, that they bloom before the earliest rose. If the weather is suitable, flower seeds may be sown on a warm border the latter part of the month. A good method to plant them, is to break the soil very fine (if the soil is of a *clay* nature, mix a little sand to loosen it, otherwise the seeds will not be able to germinate,) then take a *six inch* flower pot inverted, and press the soil, sow the seed in the ring made by the flower pot, if the seed is very fine, merely pressing it with the flower pot will be found sufficient; other kinds should have a little soil strewed lightly over them. A good lesson is to be learned on this subject if we observe the *successful* germination of seeds dropped from the parent plant. Tulips Hyacinth, Narcissus, &c., may be planted the early part of this month. Plants that has been wintered in cellars, should be brought out the latter part of the month; but previous to that they should have fresh air admitted to them as freely as possible.

State Agricultural School Convention.

Pursuant to public notice, the Agricultural School Convention met in the Senate Chamber, Harrisburg, Tuesday, March 9th, 1853.

The Convention was called to order by Simon Cameron, and organized by the appointment of Christian Myers, of Clarion county, President, and John Montgomery, of Northumberland, and Alfred L. Kennedy, of Philadelphia, Secretaries.

Voted, on motion of G. Blight Browne, of Montgomery county, that a committee of seven be appointed to nominate permanent officers of the Convention.

Whereupon the Chair appointed the following gentlemen:—G. Blight Browne, Montgomery; Wm. Heister, Berks; P. O. Way, Allegheny; H. N. McCallister, Centre; J. B. Johnson, Erie. A. O. Heister, Dauphin; J. W. Alexander, Washington.

Voted, on motion, That the officers of the State Agricultural Society, who are now present, and who

have not been appointed delegates, be admitted to seats in the Convention.

Voted, on motion of A. S. Roberts, of Philadelphia, that a committee of three be appointed to wait on the Governor and Heads of Departments, and invite them to take seats in this body.

The Chair appointed under the resolution, Messrs. A. S. Roberts, of Philadelphia; A. O. Heister, of Dauphin; H. Jones Brooke, of Delaware.

Voted, on motion of A. L. Elwyn, of Philadelphia, that the counties of the State be called, and the delegates present their credentials in order.

Pending this call, the committee on nominations submitted the names of the following officers:

President—John Strohm, of Lancaster county.

Vice Presidents—Everard Ohles, of Juniata co.; John Murdoch, Jr., of Allegheny; James Miles, of Erie; Charles B. Trego, of Philadelphia.

Secretaries—A. O. Heister, of Dauphin; John M. Sullivan, of Butler; Alfred L. Kennedy, of Philadelphia.

The President elect, on taking his seat, thanked the Convention for the honor they had done him, and invited their earnest attention to the important educational movement in which they were engaged.

The following gentlemen were received as delegates.

Adams—David Mellinger.

Allegheny County Agricultural Society—Benjamin Kelley, Wm. Martin, P. O. Way, Henry Ingram, J. E. McCabe, John Murdoch, Jr., J. M. K. Snodgrass, R. C. Walker.

Beaver county—B. B. Chamberlain, A. Roberson.

Blair county—Joseph Dysart.

Bedford county—Levi Evans,

Butler county—John M. Sullivan.

Bradford county—Charles F. Weller, Jr., John Passmore.

Berks county—Wm. M. Heister.

Centre county—H. N. McAllister.

Clearfield county—William Bigler.

Columbia county—George Scott.

Cumberland county—Frederick Watts, George H. Bucher.

Delaware county—J. P. Abraham, H. Jones Brooke.

Dauphin county—David Mumma, Jr., John P. Rutherford, A. O. Heister, Simon Cameron, Robert McAllister.

Erie county—J. B. Johnson, John S. Walker, James Miles.

Fayette county—A. M. Hill, Amisi Walker, Thos. Searight.

Juniata county—Everard Ohles.

Lebanon county—John C. Seltzer.

Lancaster county—Joseph Konigsmacher, John Strohm, Benjamin Herr, David Cockley, Christian L. Hunsicker, Abraham Kruffman.

Luzerne county—S. Benedict.

Lycoming county—H. B. Packer.

Montgomery Co. Agricultural Society—G. Blight Browne.

McKean county—Byron D. Hamlin.

Northampton county—Charles Aug. Luckerbach, Isaac Richards, Thomas Barr.

Northampton Agricultural Society—George W. Stein, Wm. H. Hutter.

Northumberland County Agricultural Society—John Montgomery, James Cameron.

Potter County Agricultural and Horticultural Society—James L. Rooks.

Philadelphia Society for Promotion of Agriculture—Alfred L. Elwyn, John C. Cresson, Algernon S. Roberts, William M. Meredith, David Landreth, Isaac

Newton, John S. Hart, Charles B. Trego, Alfred L. Kennedy.

Schuylkill county—John Hendricks, Jacob Hammer, John Horn.

Somerset county—John P. H. Walker.

Susquehanna county—George Walker.

Union county—Eli Slyfer, O. N. Worden.

Venango county—Edwin C. Wilson.

Warren county—J. Y. James.

Westmoreland county—John McFarland, C. P. Markle.

Washington County Agricultural Society—J. W. Alexander, J. M. McDonald.

Wyoming county—E. Mowry.

Voted, on motion of G. Blight Brown, of Montgomery, that a committee of seven be appointed to prepare business for the action of the Convention.

The Chair appointed Messrs G. Blight Brown, of Montgomery; A. L. Elwyn, of Philadelphia; P. M. Watts, of Cumberland; Simon Cameron, of Dauphin; Benjamin Herr, of Lancaster; Angerson S. Roberts, of Philadelphia, and H. N. McAllister, of Centre.

On motion of Mr. Roberts, John S. Hart, of Philadelphia, was added to the committee.

The following gentlemen were admitted to seats in the Convention:

R. T. Underhill, Westchester county, New York; Morris Leech, Mercer county, Pa.; Maxwell McCaslin, Greene county, Pa.; George V. Lawrence, Washington county, Pa.; O. B. McFadden.

Voted, on motion of R. C. Walker, that when the Convention adjourn, it adjourn to meet this evening, at 7 o'clock, in the same place.

Joseph Konigsmacher, of Lancaster, submitted the following resolution:

Resolved, That the Corresponding Secretary of the State Agricultural Society be requested to open a correspondence with John Meshullam, of Jerusalem, Palestine, in regard to the success of the American Agricultural Colony Associated with him in the vicinity of Jerusalem, for the purpose of enlightening the people of the Holy Land in the science of Agriculture.

On motion, the resolution was adopted, and a letter from J. Meshullam, as published in the Sabbath Recorder, of New York, was read to the Convention.

On motion, adjourned.

EVENING SESSION.

The Convention re-assembled at 7 o'clock.

Meesrs. Williamson, of Chester county, and Bidle, of Philadelphia, were, on motion, admitted to seats in the Convention.

On motion of James Cameron, of Northumberland, that the Convention now hear the report of the Committee appointed this morning to prepare business, which was so ordered, and the following Report was read by F. M. Watts, of Cumberland:

REPORT.

The plan which the Committee offer to the Convention is, they think, simple, practicable and inexpensive, and perfectly well adapted to carry out the design they have in view, and fulfil every hope of the most sanguine friend of agriculture.

They do not propose the founding of a university, or any system of education which would require a long preliminary preparation on the part of the pupil, and rich endowments from the State or individuals. They design only a school where instruction can be had in the usual branches of what is called an English education, and in the elements of the different sciences which are immediately and inti-

mately connected with agriculture. At present, in no part of this State or of the United States, can a farmer's son be taught anything but the rudimentary branches of education. Of all those sciences and arts which form the very basis of his future occupation, he is either entirely ignorant, or is only able to collect a few isolated facts, of whose general bearing, and whose appropriate position in the philosophy of agriculture, he knows very little, or nothing at all.

This condition of things acts as unfavorably on the individual as upon agriculture. No man is disposed to believe that he is practising a profession of much importance, when he is conscious of no very considerable effort of the mind to acquire it, and finds that his facts, all his knowledge, and the whole action of his mind, as respects his art, are rather the superstitious observance of old customs, which came to him as the traditionary experience of his ancestors, than the result of his own observation or thought. But the doctrine of precedents, however safe, is too unyielding to continue as a constant and fixed rule, to which no exception can be taken, and from which there is no departure, under any circumstances.

There is a spirit of examination abroad in the world, from whose scrutiny nothing escapes; and agriculture, which, till within a few years, was regarded as a kind of tranquil retirement for dull minds, has passed to the crucible of the chemist, the closet of the philosopher, under the close and deep examination of the man of science, and entered among the profound speculations of the political economist. The destiny of this noble art is now entirely removed from mere manual dexterity or the pursuit of old customs. Powerful and acute minds are busy with it, minutely examining its practical details, in all its departments, endeavoring to break down the obstinacy of old ideas, by analysis of their truth, and form principles and philosophy from what has heretofore been but a crude mass of ill arranged and imperfectly examined assertions. It is now a progressive art, and rapidly assuming the form and condition of a science. Conscious of this, those who have the interests of agriculture deeply at heart, have determined to propose to their fellow citizens, and the farmers of the State, a plan, by which they cannot only keep pace with the general movement, but prevent themselves from falling behind other States, which are already commencing the establishment of Schools and Professorships of Agriculture.

Title—"The Farmers' High School of Pennsylvania."

Situation.—An important object, next to healthiness, in the selection of a site for this school, is variety of soil and of surface. It will be necessary for the pupils to be taught, if it be possible, all the different modes of husbandry capable of being performed in our climate. The soil should admit of the cultivation of all the grains, the grazing of cattle, and the raising of all the products of the dairy; so that every pupil may have full experience, and a complete preparation for the practising any one of these modes of farming. The place chosen should be near a market, or of such easy access as to allow of ready sales; though we would not recommend the immediate neighborhood of a large town, that there might be no risk or temptation to the moral conduct of the boys. Pennsylvania offers many such situations, and there can be but little difficulty in a selection.

Quantity of Land.—This will be controlled so much by the site fixed upon, that we cannot well de-

termine the precise quantity; we are of opinion, however, that not less than two, or, if possible, three hundred acres, should be purchased, as one of the desirable objects in the education of the boys will be the knowledge of machinery, as well as some skill in its construction.

Educational Organization.—As the leading object of the school is instruction in agriculture, the head should be a practical farmer; a man competent to teach the best modes of husbandry, to instruct in their details and possessing such an amount of mechanical skill or knowledge of machines as will enable him to describe the uses, together with the design and value, of the various agricultural implements and machinery. He should likewise be familiar with the raising and fattening of stock-cattle, and the growing of wool; have a knowledge of the different breeds of animals; or, to sum up his qualifications, he must be a good farmer, capable, by his character and example, of moulding the pupils entrusted to his care to such habits of mind and of persevering industry as will send forth into the Commonwealth active, able and accomplished farmers.

Assistants.—Besides the Principal, whose duties have just been given, we propose three assistants; one to teach the usual branches of an English education; another to instruct in natural philosophy; and the third in Chemistry, Geology and Botany. It is no part of our plan to call for men of the highest qualifications in any one of these departments; as it will not be possible to pay the large salaries such persons might very justly expect, and to which they would be justly entitled, even if the minds of those pupils whom we hope to see gathering to this school were fitted to receive any thing beyond elementary instruction. There are, however, many young men in the country fully competent to take charge of such a seminary, and to advance the pupils as far as their age and probable continuance at the school will admit. Besides the studies already mentioned, which are such as are taught in the schools and academies of the land, there are others, belonging to agriculture, which are of the utmost importance to the practical farmer, such as several departments of Natural History, Surveying, and Veterinary Surgery and Medicine. These, if the school becomes a place of resort for the sons of our farmers, each of whom is to manage and work his own property, must be made, at some time, a necessary part of the plan of study.

Pupils.—None should be admitted younger than fourteen or fifteen. Whether an examination should be required is a matter meriting some consideration, though it does not seem to be absolutely necessary; as a boy will soon display his incompetence to receive the prescribed studies, without the formality of an examination. The times for admission may be twice in a year, selecting the periods when the season for labor in the field commences, and when it closes. All the pupils will be required to work, as the business of their lives is supposed to be practical husbandry; of which they must learn and become proficient in the most minute details. No one, under any circumstances, should be allowed to escape from labor, of whatever kind it may be, or to select a particular portion; and there should be no evasion of these rules, unless in cases of physical inability. The object being to impart a practical as well as a scientific education, every pupil must be taught those details of personal labor which will form a large part of the future duties of his life. A certain number of hours in each day—the committee think that three, at least, will be necessary—must, therefore, be devoted to this purpose.

To combine practice with theory, to learn the reasons of things, and to acquire, by experience, the whole routine of a farmers life, are the great purposes in the establishment of this school. We would also propose that a certain number of pupils be educated gratuitously: one might be admitted from each Congressional district.

Buildings.—In an experiment, such as is now proposed, the smallest possible outlay should be kept in view as one of the most important considerations. In founding an Institution, the success of which depends on legislative or individual encouragement, the great object should be permanent practical usefulness; and in order to attain this and recommend the plan to the farmers of the State, we reject, in all cases, every idea of mere ornament. It is not necessary to erect any other buildings than those usual on a farm, enlarged to such an extent as to accommodate the increased number of persons. A single building, containing apartments for the instructors, sleeping rooms for the pupils, recitation rooms, a library, lecture-room and laboratory, arranged to hold with comfort one hundred persons, is, perhaps, all that is necessary as a commencement. A barn suited to the size of the farm, with every convenience for the feeding of cattle, the care of horses and cows, the storage of roots, and the preservation of manure, with a granary, corn-crib, implement house, a shed for waggons and carts, with a carriage-house attached—these, with the exception of a spring house as a part of the dairy, and some small buildings for poultry, seem all that is necessary at the opening of our design.

Now, inasmuch as the views of your committee are based upon the idea that in Pennsylvania we are about to enter upon an untried project, the first dictates of prudence suggest that we should proceed cautiously so far as regards our first expenditure; that the institution which we propose should rather grow than be suddenly forced into practical usefulness; that its operations may be the result of experience, rather than the suggestion of mere theoretical calculation. We think that the first outlay should be:

For 200 acres of land,	\$9,000 00
Necessary buildings and improvements,	8,000 00
Stock of the farm and furniture,	3,000 00
	<hr/>
	\$20,000 00

The question now presents itself, how is this money to be raised, and how is the institution to be sustained? First, we propose that it shall receive legislative sanction, by an act of incorporation, and that the amount of money which it will be necessary to expend, and provide for the maintenance and support of the institution shall form the capital, to be divided into four thousand shares, of twenty-five dollars each, making one hundred thousand dollars; an amount which, if the project be successful, as we anticipate, may, at some future day, be necessary.

To raise this amount for the early requirements of the Institution, we must rely upon the United efforts of individuals and the representatives of the whole people. We are satisfied that individuals will contribute at least ten thousand dollars. The Pennsylvania State Agricultural Society will contribute five thousand dollars; and if the State will contribute ten thousand dollars, we shall thus be in possession of the means of commencing a school, which we have every reason to believe will grow into size and extensive usefulness. Let it not be supposed that the views of your Committee are too limited with regard to the character of such an institution. We are well

aware that a more enlarged plan would be more commensurate with the character of the great State of Pennsylvania; and if the Legislature in its wisdom should deem it expedient and politic to enlarge it, we shall look upon such action as being a most happy expression of the public will. Our view is to let this project have a beginning, and we have all confidence that, under the genial influence of enlightened minds, it will work itself into public favor.

Your Committee, therefore, offer for the consideration of the Convention the following:

Resolved, That— be a Committee whose duty it shall be to draft a bill in accordance with the principles of this report, and submit the same for the action of the Legislature.

The subject matter of the report was eloquently discussed by F. M. Watts, of Cumberland; John C. Cresson, Philadelphia; Benjamin Herr, Lancaster; David Mumma, jr., Dauphin; Wm. M. Meredith, Philadelphia; G. Blight Brown, Montgomery; Jas. Cameron, Northumberland.

On motion of A. S. Roberts, of Philadelphia, that the blank in the resolution be filled with the name of Frederick Watts, of Cumberland; Simon Cameron, Dauphin; Christian Myers, Clarion; H. Jones Brook, of Delaware, and the President of the Convention, which was so ordered, and the question recurring on the resolution as amended, it was unanimously adopted.

A vote of thanks to the Senate for their kindness in tendering the use of the Hall, and to the presiding officers of the Convention was passed, and the Convention, on motion, adjourned.

Pennsylvania Horticultural Society.

The stated meeting of this Society occurred in the Chinese Saloon, on Tuesday evening, March 15, 1853, the President in the chair. The sudden change from mild to severely cold weather, precluded the imposing display of large Azaleas, Rhododendrons, and fine green house plants usual at the March meeting; yet those who attended were amply repaid with the sight of many interesting plants, and beautiful cut flowers in the tasteful designs, baskets and boquets, shown. Mr. J. F. Knorr's gardener, from West Philadelphia, exhibited a dozen of choice blooming plants, six pots filled with Hyacinths, and the following new kinds:—*Tempeltonia glauca*, *Abutilon Vanhouttii*, *Azalea alba-striata*, *A. exqu岸ita*, *Cinerarias*, *Carminata*, *Vicar of Wakefield*, *formosa*, Mr. Sydney Herbert, Marianne and Amie Robsart. Mrs. Cope's gardener brought a dozen select standard plants, a collection of *Cinerarias*, and two species shown for the first time—*Rhodostemma gardenoides*, and *Hypocyrtia strigilosa*. Peter Raabe, a large vase with a great number of blooming Hyacinths—a rich show.

On the fruit table were seen a small basket of Strawberries from Mr. Cope's houses; Easter Beurre Pears, from Thos. Hancock's; St. Germain and Nouvelle d'Esperin Pears, and Reinette franche Apples, from Mrs. J. B. Smith; and Newtown Pippin and Carthouse Apples from Robert Cornelius; and also two large collections of Vegetables from R. Cornelius' and C. Cope's.

The following premiums were awarded:—*Azalea*, for the best grown specimen, to Thos. Meghran, gardener to Robert Cornelius; *Plants in pots*, for the best 12 specimens, to John Bell, gardener to J. F. Knorr; for the second best, to Thos. Meehan, gardener to C. Cope; new plants shown for the first time, to Thos. Meehan, gardener to C. Cope; a premium of two dollars for *Rhodostemma gardenoides* and *Hypo-*

cyrtia strigilosa. Attention of the Society was particularly called to the new plants shown by Mr. Knorr's houses, *Tempeltonia glauca* *Azalea alba striata*, *A. Exqu岸ita*, *Abutilon striatum Vanhouttii*, and a fine collection of *Cinerarias* *Carminata*, *Vicar of Wakefield*, *formosa*, Mrs. Sydney Herbert, Marianne and Amie Robsart. And for an American seedling *Camellia*, a fine double white, the silver medal to John Sherwood. *Bouquet designs*, for the best, to Thos. Meehan, gardener to C. Cope; for the second best, to Thos. Meghran, gardener to R. Cornelius. *Basket of Cut Flowers*, for the best, to Thos. Meehan; for the second best, to A. Hall, gardener to D. Rodney King; and a special premium for a Basket to Thos. Meghran; and another to Peter Raabe, for a large Pyramid of Hyacinths.

By the Committee on Fruit.—*Pears*—For the best ten specimens, the Easter Beurre, to Thomas Hancock. *Apples*—For the best ten specimens, the Newtown Pippin, to Thomas Meghran; for the second best, the Reinette franche, to F. Gouin, gardener to J. B. Smith. And a special premium to Thomas Meehan, gardener to C. Cope, for a basket of Hovey's Seedling strawberries.

By the Committee on Vegetables—For the best and most interesting display by a private gardener, to Thomas Meghran, Gardener to R. Cornelius, and for the second best to Thomas Meehan, gardener to C. Cope.

AD INTERIM REPORT.

The Fruit Committee respectfully report, That since the last stated meeting of the Society, they have received and examined specimens of the following varieties of fruits.

From Charles Kessler—*The Reading*—This valuable winter pear has been noticed in several of our ad interim reports. The present specimens which were eaten on the 11th inst., have strengthened the favorable opinion previously expressed by us, of its merits.

The Keim—which we have previously described, appears to be a late keeping winter apple, assuming a more beautiful waxen appearance with the advance of the season.

Evening party—This is the third time this delicious little apple has been submitted to our examination, during the present season. Each successive trial has served to confirm our estimate of its value.

The Orange—A medium sized native apple, from the garden of Nicholas Lot, of Reading. The original tree which stood on the adjoining premises is now dead. The fruit is roundish, slightly oblate, faintly ribbed, of a warm, yellow color, approaching orange; stem short, thick; cavity open, shallow, obtuse, irregular; basin shallow, wide, plaited. Flesh yellowish, with a slight orange tint; flavor sprightly; quality "good."

The Ohlinger—A native apple of Pennsylvania. It originated with Mr. Ohlinger in Alsace Township, Berks county. It fruited in 1852, for the first time. Fruit below medium size; roundish; waxen yellow, with a pale, brownish cheek, containing many white spots, with usually a russet speck in each; stem $\frac{3}{4}$ of an inch long, slender; cavity deep, wide, russeted in rays; basin wide, shallow, furrowed; seed brown, short, round ovate; flesh yellowish white, fine texture; sprightly flavor; quality "good."

The Dumpling—A large, roundish, oval, yellow apple; stem short; cavity contracted, shallow; basin narrow, rather deep. This is entirely distinct from the Dumpling of Cox, and is a good deal cultivated in some parts of Pennsylvania for culinary purposes.

The Alsace—A seedling apple of Alsace township; size medium; form conical; skin whitish yellow, with a pale blush on the exposed side; stem short, slender; cavity narrow, acuminate; basin deep, open; flesh whitish, fine texture, juicy; pleasant flavor; quality, "good." Though eaten on the 12th of March, it is said to be in eating order in September.

The Fallawater or Fornwalder—The Fallawater of Dawning—A large, yellowish green apple, with a brown blush, uniformly fair, and of "good" quality. It is abundant in our markets, and, at this season of the year, the largest apple to be found there.

From W. Boas, of Reading—*The Krouser*—This apple has been described in a previous report, and is represented as being wonderfully productive.

From Casper Miller—*The Hess*—A native apple of Conestoga, Lancaster county, Pa. Size medium; form variable, sometimes roundish, often conical; red, in stripes of different hues; stem short, rather stout; cavity narrow, moderately deep, slightly russeted; basin deep, narrow; flesh greenish white, tender; flavor agreeably aromatic; quality "very good."

Five gentlemen were elected members.

On motion, adjourned.

THOMAS P. JAMES,
Recording Secretary.

Chester County Horticultural Society.

The stated meeting of this Society was held on the 12th inst. Plants and flowers were exhibited by Paschall Morris & Co., and A. Marshall & Co.

A premium was awarded to Paschall Morris & Co. for the best display of Green House Plants.

Also to same Firm for best display of hyacinths, and the best collection of evergreens in pots.

The display of apples was unusually fine for the season. Joshua Embree exhibited 30 varieties, and was awarded a premium for the best display. Amos H. Darlington, 16 varieties; Ziba Darlington, 11; Jonathan C. Baldwin, 7; Robert Lamborne 1; Richard Downing, some very fine Baldwins of Chester county growth. P. Morris & Co., exhibited a specimen of the Hector apple, a new Chester county seedling; also two other seedlings. John Cope exhibited a plate of fine St. Germain Pears. Pears were also exhibited by Ziba Darlington.

Premiums were awarded to Rachel Taylor for best one dozen radishes, and best half peck of spinach. Among the plants exhibited by P. Morris & Co., were *Habrothamnus Elegans*, five varieties of *Cinerarias*, *Begonia*, *Fuschioides*, *Cammellias*, splendid *Azaleas*, *Forsythia Viridissima*, a new shrub from China, in flower, perfectly hardy; *Spirea Prunifolia*, *Heliotropes*, scarlet *Geraniums*, *Lechnaultia Formosa*, &c. Also evergreens in pots; *Abies Morinda*, *Taxodium Sempervirens*, *cryptomeria japonica*, *arancaria imbricata*, *cupressus funabris*, *abies Douglasii* and several others.

The annual election of officers was also held, which resulted as follows:

PRESIDENT—John Rutter.

VICE PRESIDENTS—JAMES H. Bull, Amos H. Darlington.

RECORDING SECRETARY—Isaac D. Pyle.

CORRESPONDING SECRETARY—Joseph P. Wilson.

TREASURER—John Marshall.

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

HECKLING FLAX AND HEMP.—By J. P. Arnold, of Louisville, Ky: I do not confine myself to any particular form or arrangement of the parts, so long as the machine is so constructed that it will operate as set forth.

I claim the method of heckling hemp by subjecting it to the action of a series of mixed beaters and combs, the teeth of the latter being of varying length—some of them projecting so far, and others beyond the beaters, and the whole operating substantially as set forth.

Also a rest, having a narrow slot open at one end in combination with a concave projecting beyond the end of the cylinder at the open end of the rest, as set forth.

FOR SAWING STONE.—By Jas. T. Bruen & Jas. G. Wilson, of Hastings, N. Y.: We claim lifting the saws at or sufficiently near the middle of the stroke, to effect the specified purpose.

Also interposing india rubber or its equivalent, between the ways, and the inclined projections which lift the saw frame, as specified.

GRAIN WASHERS.—By George & George W. Feaga, of Frederick, Md.: We claim the method, as described, of separating grain from smut, garlic and other impurities by first washing it in a trough or reservoir of water, where the separation takes place, and then conveying the washed grain to a drying apparatus, where it is thoroughly dried, the whole operation being performed as set forth.

HILL SIDE PLOWS.—By J. C. Bidwell & J. Hall, of Pittsburg, Pa., executors of Samuel Hall, dec.: We claim the manner of arranging the mould board upon the land side, to wit, placing their hinges at such a distance from each other on each side of the centre of the land side, that each mould board may be supported by the edges and projection, as far as practicable, from the hinges and rest upon the grooves near the middle of the land side, as set forth.

POTATO DIGGERS.—By F. C. Schaffer, of Brooklyn, N. Y.: I am aware that machines have been previously used for digging potatoes, but in these machines the potatoes are dug or scooped from the hills by means of a concave or scoop formed of a single piece, the brush cylinder carrying the potatoes up the concave and into the receptacle. I therefore do not claim the above arrangement; but I claim the arrangement and combination of the scoop and endless apron, by which the potatoes are dug or scooped from the hills, and the dirt thoroughly separated therefrom, as they pass up the endless apron into the receptacle.

RAKES TO HARVESTERS.—By T. Baylis & Daniel Williams, of Tecumseh, Mich.: We claim the construction and method of operating the rake, together with the use of the jointed brake, in facilitating the discharge of the sheaf at the rear of the machine, as set forth.

SCYTHE FASTENINGS.—By P. Frost, of Springfield, Vt.: I claim the peculiar construction of the loop and the set ring, with the grooves, in the manner set forth.

CIRCULAR SAWS.—By Ammi M. George, of Nashua, N. H.: I claim in combination with a circular saw, driven by friction, near its periphery, the guard plate with its arbor, around which the saw runs, and by which it is held into the wood, and on which the board or veneer, being sawed, may rest and relieve

the saw from all friction therefrom, and by which means I am enabled to cut boards or veneers, of nearly equal width with the diameter of the saw, as described.

MANURE SPREADERS.—By Silas A. Hedges, of Lancaster, Ohio: I claim constructing a manure cart with two bodies, the front one of which is raised or tilted, for the discharge of manure into the rear one, by the action of the hind axle, by reason of another axle and tackle, when thrown into gear by the hand lever, arranged as set forth.

I also particularly claim the combination of the endless apron, the tilting body, and raising the tail-board simultaneously with throwing in gear the endless slotted apron, as set forth.

SHUT MACHINES.—By Dan. Pease, Jr., of Floyd, N. Y.: I claim the employment of the adjustable deflector, set at an angle to throw the grain in different directions, in combination with the receiver, the top of the said receiver being adjustable to any height desired, and the front piece of the same being set in such a position, in relation to the deflector, that it will, when the grain strikes the deflector, be thrown against the said plane surface, which, from its peculiar position, will throw the grain in a partially spread state, up against the adjustable top, which causes it to spread still more, and then to fall down on the ribbed bottom, and pass off through the wind pipe.

Also, causing the grain to spread to a greater or less degree, by making the top of the receiver adjustable to different heights, as described.

HANGING FARM GATES.—By John Filson, Milroy, Pa.: I claim the lower double jointed hinge, in combination with the apparatus attached, and constituting the upper hinge, as described, for the purpose of holding the gate at any inclination required, for the purposes set forth.

WINNERS.—By G. F. S. Zimmerman, of Charlottesville, Va.: I claim the invention, use and application of the perforated vibrating table, arranged to a sloping bottom or platform, the parallel saw-like strips or saw pushers, combined with an oscillating rake and straw beaters or curved prongs, the whole combined and working with the oscillating hinged standard, and suspending straps, substantially as set forth.

I do not, however, claim the invention of a combined threshing, separating, and winnowing machine, but only such parts as are set forth.

CORN SHELLERS.—By J. P. Smith, of Hummelstown, Pa.: I claim the bevelled spring blocks or shelling bars, in separate pieces, in the manner and for the purposes set forth; but I do not claim to be the inventor of spring blocks or shelling bars.

SEED PLANTERS.—By Samuel & William H. Withrow (assignor to Samuel Withrow) of Gettysburg, Pa.: We claim arranging the spring and roller within a tube, forming one end of the hopper, in such manner as to prevent any more seed from leaving the hopper than is required for planting, the whole arranged as set forth.

Also, the arrangement of the drag bar under the plow beam, and passing through the adjustable hanger, and a slot in the neck of the mould board, for the purpose of giving additional lateral support to it, and protecting it from the earth, which runs up on the mould board, in turning the furrows, the whole being arranged and combined as described.

MACHINES FOR PARING APPLES.—By Wm. H. Lazelle, of New York City (assignor to S. E. Fenwick,

of Washington, D. C., & N. E. Smith, of New York City): I claim the apple paring machine, constructed with a stationary circular rack or way, in combination with a traversing lever, for operating the fork on which the apple or other article is placed, the said handle having a pinion on it, which traverses the said rack, and gives rotary motion to the fork, making the apple to revolve against the swinging spring knife, while the handle is pushed backwards and forwards in a horizontal direction, by the operator, in the manner described.

EXPANDING DRILL.—By Thos. Prosser, of New York City: I claim the combination of the inclined cutter, with a screw cut thereon, bevel screw pinion, or its equivalent, and collar arranged in the manner described, so that by holding said collar, during the rotation of the drill, a continuous feed motion is communicated to the cutter.

WINNERS OF GRAIN.—By A. B. Childs, of Rochester, N. Y. Patented in England, May 22, 1852: I claim regulating the blast for the second winnowing of grain, by combining with the revolving fan, which generates both the first and second blast, and a compensating safety valve, as set forth, but I make no claim to a spring valve, in itself, as such a contrivance is well known for various purposes.

I also claim the self-regulating valve, which prevents the admission of air into the machine, while it opens, to discharge the impurities separated from the grain, and thus prevent an undue accumulation of them at the bottom of the air chamber.

FOR SAWING STONE.—By Jas. T. Bruen & Jas. G. Wilson, of Hastings, N. Y.: We claim lifting the saws at or sufficiently near the middle of the stroke to effect the specified purpose.

Also interposing india rubber or its equivalent, between the ways, and the inclined projections which lift the saw frame, as specified.

CURRY COMBS.—By Wm. Wheeler, of Troy, N. Y.: I claim the application of a ring, loop, or fixture on curry combs, for the insertion of a thumb as a guard and rest therefor, the ring or loop being made in one piece with the back strap, as set forth.

Hermetically Sealed Provisions.

The business of putting up provisions in hermetically sealed cans, has become quite an important one in our city. There are five large establishments engaged in it. Beef, mutton, lamb, lobsters, clams, meats and sheep's tongues, with green corn, green peas, green beans in their season, &c., &c., are put up in immense quantities. But a small portion of the articles put up are used in the city—much the greater quantity being sent to New York and Boston, where they are sold to vessels bound to California, and on other long voyages, and likewise for home consumption. When taken from the cans, they are generally in excellent order, and retain much of their original flavor, although months and even years may have elapsed since they were sealed up.—Portland (Me.) Advertiser.

A NEW HERD BOOK.—The Scioto Cattle Importing Company intend shortly to publish a *Herd Book*, especially for a record of the pedigrees of the cattle belonging to the different importations of the Scioto Company, and the thoroughbred descendants of said cattle. All persons having such animals, are requested to send the pedigrees, without delay, to Thos. S. Bennett, Secretary, Chillicothe.

PENNSYLVANIA FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

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AGENTS.

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Points of Cattle.

In our last number, we referred to a valuable forthcoming report, on the *points of cattle*, by a committee of the New York State Society, headed by Francis Rotch as Chairman. In connection with some excellent prefatory remarks by him below, we quote a scale of Points, as reported for four breeds, Durham, Devon, Hereford, and Ayrshire. They deserve the especial attention of persons called upon to decide at agricultural exhibitions, between rival animals often closely balanced, and may safely be referred to as a *future standard*. If attended to as they deserve, we shall have no more awards at our annual exhibitions calculated to disgust intelligent Breeders, and render the fact of having obtained a premium often a mere burlesque. We hope the committee will not stop their work till they have arranged a scale of points for sheep.

"As to the points *constituting excellence*, little perhaps need be said, beyond the remark, that reference has been had to the particular uses and characteristics of the respective variety under consideration.—For instance, the heavy, massive form of the beef-making, indolent Short-horn, would be, in many of its details, inapplicable to the activity of the North Devon, whose great excellence as a laborer on a light soil, must be one of its leading considerations in the estimate of its usefulness. So again, of the Hereford, whose double value in the yoke and in the shambles, requires a balance of properties, that is not called for in the animal whose only destination is the butcher's block. The Ayrshire is a breed whose improvement has had reference solely to dairy properties; it would be destructive, therefore of that very improvement, to require in this, either the substance or symmetry of the other breeds.

"Another consideration has also influenced the numerical value affixed to the *same points* in *different breeds*; which is, that where from a natural or original tendency, there is a deficiency or a difficulty in bringing any one or more points up to a maximum, they are marked higher in that breed, than in one known to be naturally strong in that particular; for instance, it is more difficult from the general conformation of the animal, the heavy shoulder, and the massiveness throughout, required in the Short-horn, to breed the crops full up and even, than it is to do so in a North Devon; hence, that point well developed in the Short-horn is marked 4; in the North Devon only 3. So in the Ayrshire, whose great excellence is her dairy properties, the udder is marked 6, while in the other varieties of *improved breeds* it is marked low, inasmuch as their improvement has had reference *solely* to early maturity, weight, symmetry, reduced offal, quality, and the best feeding properties; yielding the greatest amount of meat at the smallest expense."

SHORT-HORNS—THE COW.

PEDIGREE—showing unbroken descent; on both sides, from known animals, as found in the English Herd-Book—40.

THE HEAD—small, lean and bony, tapering to the muzzle; the face somewhat long—2.

THE NOSE of a light delicate color—I.

THE EYE is of great significance, and should be prominent, bright and clear—"prominent" from an accumulation of "adepts" in the back part of its socket, which indicates a tendency to lay on fat—

"bright," as an evidence of good disposition—"clear," as a guarantee of the animal's health; whereas a dull, sluggish eye belongs to a slow feeder, and a wild, restless eye betrays an unquiet, fitful temper—2.

THE HORNS—light in substance and in color, and symmetrically set on the head; the ear somewhat large, thin, and with considerable action—1.

THE NECK—rather short than long, tapering to the head; clean in the throat, and full at its base, thus covering and filling out the points of the shoulders—2.

THE CHEST—broad from point to point of the shoulders; deep from the anterior dorsal-vertebra to the floor of the sternum, and both round and full just back of the elbows; sometimes designated by the phrase, "thick through the heart." These are unquestionably the most important points in every animal, as constitution must depend on their perfect development, and the ample room thus afforded for the free action of the heart and lungs—8.

THE BRISKET, however deep or projecting, must not be confounded with *capacity* of chest; for though a very attractive and selling point, it, in reality, adds nothing to the space within, however it may increase the girth without. It is in fact nothing more or less than a muscular adipose substance, attached to the anterior portion of the sternum, or breast-bone, and thence extending itself back. This form, however, of the brisket, indicates a disposition to lay on fat generally throughout the frame, and in this point of view is valuable—4.

THE SHOULDER, where weight, as in the Short-horn, is the object, should be somewhat upright and of good width at the points, with the blade-bone just sufficiently curved to blend its upper portion smoothly with the crops—3.

THE CROPS must be full and level with the shoulders and back; and is, perhaps, one of the most difficult points to breed right in the Short horn—4.

THE BACK, LOIN, AND HIPS should be broad and wide, forming a straight and even line from the neck to the setting on of the tail, the hips or hucks round and well covered—6.

THE RUMPS laid up high, with plenty of flesh on their extremities—3.

THE PELVIS should be large, indicated by the width of hips, as already mentioned, and the breadth of the twist—2.

THE TWIST should be so well filled out in its "seam" as to form nearly an even and wide plane, between the thighs—1.

THE QUARTERS—long, straight, and well developed downwards—3.

THE CARCASS—round; the ribs nearly circular, and extending well back—1.

THE FLANKS—deep, wide, and full in proportion to condition—1.

THE LEG—short, straight, and standing square with the body—2.

THE PLATES of the belly strong, and thus preserving nearly a straight under line—1.

THE TAIL—flat and broad at its root, but fine in its cord, and placed *high up*, and on a level with rumps—2.

THE CARRIAGE of an animal gives style and beauty; the walk should be square, and the step quick; the head up—1.

QUALITY—On this the thriftiness, the feeding properties, and the value of the animal depends; and upon the touch of this quality rests, in a good measure, the grazier's and the butcher's judgment. If the "touch" be good, some deficiency of form may

be excused; but if it be hard and stiff, nothing can compensate for so unpromising a feature. In raising the skin from the body, between the thumb and finger, it should have a soft, flexible and substantial feel; and when beneath the out-spread hand, it should move easily with it, and under it, as though resting on a soft, elastic, cellular substance; which, however, becomes firmer as the animal "ripens." A thin pery skin is objectionable, more especially in a cold climate—8.

THE HAIR should be thick, short and mossy in winter; fine, soft and glossy in summer—1.

THE UDDER—pliable and thin in its texture, reaching well forward, roomy behind, and the teats standing wide apart, and of convenient size—1.

POINTS OF THE SHORT-HORN BULL.

As regards the male animal, I have only to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong, vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description as never to be discovered in the females of his get.

In contradistinction to the cows, the head of the bull, may be shorter, the frontal-bone broader, and the occipital flat and stronger; that it may receive and sustain the horn—and this latter may be excused if a little heavy at the base, so its upward form; its quality and color be right. Neither is the looseness of the skin, attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but leaves the gullet and throat clean and free from dewlap.

The upper portion of the neck should be full and muscular, for it is an indication of strength, power and constitution. The spine should be strong, the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.

NORTH DEVONS—THE COW.

PURITY OF BLOOD, as traced back satisfactorily to importations of both dam and sire, from known English breeders, or as found in the lately established Herd-Book, for North Devons—40.

THE HEAD should be small, lean and bony, the forehead wide, flat, or from a fullness of the frontal bone over the eyes, somewhat dishing; the face straight; the muzzle fine; the nostrils open; the lips thin, and rather flat—2.

THE NOSE of a light delicate color, it being a test of pure blood—2.

THE EYE should be bright, prominent, and clear, but mild and gentle in its expression, as indicative of that spirited, but tractable disposition so necessary to cattle that must bear the yoke; a beautiful orange-colored ring should invariably surround the eye—1.

THE EAR—thin; of a rich orange color within, of medium size, with a quick and ready movement, expressive of attention—1.

THE HORNS—light, tapering, of a waxy color towards the extremity, and gaily, as well as symmetrically placed on the head; the occipital bone narrow, thus bringing the base of the horns nearer together.—1.

THE NECK of medium length, somewhat light in substance, very clean, and pretty well set up on the shoulder—1.

THE CHEST—deep and round, carrying its fullness

well back of the elbows, thus affording, by the aid of a springing rib, abundant internal room for the action of the thoracic viscera, the heart and lungs, and that too without an *extreme* width forward, and between the points of the shoulders, which might interfere with the action of the animal.—8.

THE BRISKET—it being assumed that it adds nothing to the internal capacity of the chest, must not overload the breast, but be sufficiently developed to guarantee a feeding property, attended with a full proportion of fatty secretion.—2.

THE SHOULDER is, in this breed, a very beautiful and important point, and should in a *degree* approximate in form to that of the horse. It should take a more sloping position than is found in most other breeds, with its points less projecting, and angular, and the blade bone more curved, thus blending with, and forming a fine wither, rising a little above the level line of the back.—3.

THE CROPS full and even, forming a true line with the somewhat rising shoulder, and level back, without either drop or hollow.—2.

BACK, LOIN, AND HIPS, broad and wide; running on a level with the setting on of the tail.—6.

THE RUMPS—lying broad apart, high, and well covered.—3.

THE PELVIS—wide.—3.

THE TWIST—full and broad.—3.

THE QUARTERS long and thoroughly filled up between the hocks, or hip bones, and the rumps; with a good muscular development down the thigh to the hocks.—4.

THE FLANK—Moderately deep, full and mellow in proportion to condition.—1.

THE LEGS not too short, and standing as square and straight behind, as may be compatible with activity. The bone quite small below the hock and knee; the sinews large and clean, with the fore-arm well developed.—3.

THE CARCASS round and straight; its posterior ribs almost circular, extending well back, and springing nearly horizontally from the vertebra, giving in fact, much greater capacity than would at first appear.—1.

THE TAIL, at its junction, level with the back, long, very slender in its cord, and finishing with a tassel of white hair.—1.

THE COLOR, in its *shades and degrees* is more or less governed by fashion; but in the Devon is always red. Formerly a rich blood red was the favorite color, and a test of purity, and now a somewhat lighter color is in vogue, approaching rather nearer to that of the *South Devon*, which is a larger, coarser, stronger animal. In all cases the color grows lighter round the muzzle, while a dark mahogany color, verging almost to a black, and growing yet darker about the head, always was a very questionable color for a *true North Devon*, more especially when accompanied by a dark nose.—1.

THE HAIR should be short, thick, and fine; and if showing on its surface a fine curl, or ripple, it looks richer in color, and is supposed to indicate a hardier and more thrifty animal.—1.

THE UDDER should be such as will afford the best promise of capacity and product.—1.

CARRIAGE.—The Devons having from their excellence in the yoke, another destiny besides that of the butcher's block, it is all important that the animal's carriage should indicate as much; but to obtain this, something of the heavy, inert, squarely moulded frame of the merely beefing animal must be relinquished for a lighter and more active frame.—1.

QUALITY.—The skin elastic, flexible, and not too thin,

resting on a rich mellow yielding substance between it and the muscle.—8.

Same general remarks in regard to points of the Devon bull, as made in reference to the Short-Horn.

HEREFORDS—THE COW.

PURITY OF BLOOD, as traced back to the satisfaction of committees, to imported blood *on both sides*, from some known English breeder, or as found in Eytton's Hereford Herd Book; 40.

THE HEAD, moderately small, with a good width of forehead tapering to the muzzle; the cheek-bone, rather deep, but clean in the jaw; the nose light in its color, and the whole head free from fleshiness; 2.

THE EYE full, mild, and cheerful in its expression; 1.

THE EAR of medium size; 1.

THE HORNS, light and tapering, long and spreading, with an outward and upward turn, giving a gay and lofty expression to the whole head; 3.

THE NECK, of a medium length; full in its junction with the shoulders, spreading well over the shoulder points, and tapering fine to the head; 3.

THE CHEST, broad, round and deep; its floor running well back of the elbows, which with a springing fore-rib, gives great interior capacity to this all-important portion of the body; 8.

THE BRISKET, when in flesh, largely developed, descending low between the legs, and deep, by covering the anterior portion of the sternum, or breast-bone, but never interfering with the action of the animal when in working condition; 3.

THE SHOULDER, lying snugly and closely towards the top, and spreading towards the points; the blade sloping somewhat back, and running pretty well up into the withers, which by rising a very trifle above the level line of the back, gives to the ox a very up-standing, and beautiful fore-end. The whole shoulder well clothed with muscle; 3.

THE CROPS, filling all up evenly behind the shoulders, and blending it smoothly in with the muscles of the back; 2.

THE BACK, LOIN AND HIPS, should be broad, wide, and level; 4.

THE RUMPS should lie nearly, or quite level with the back, and their covering should be abundant, mellow, loose, and freely moving under the hand, thus showing great aptitude to fatten; 4.

THE PELVIS, roomy; indicated by wide hips, as already mentioned; and the space between the rumps, which should stand well apart, giving a general breadth to the posterior portion of the animal; 4.

THE TWIST broad and full; 2.

THE HIND QUARTER, large and thoroughly developed in its upper and more valuable portions, as beef. The thigh gradually tapering to the hock, but muscular; 3.

THE CARCASS, round throughout; full and capacious, with the under line of the belly level, or nearly so; 1.

THE FLANK full and wide; 1.

THE LEGS, straight, upright; firmly placed to support the superincumbent weight; a strong back sinew, but by no means a large, coarse, cannon bone; 3.

THE TAIL, large and full at its point of attachment, but fine in its cord; 1.

THE CARRIAGE, prompt, resolute, and cheerful; and in the ox, gay and lively; 1.

THE QUALITY is indicated by a flexible, soft, yet substantial skin, resting on a somewhat firm, but rich, mellow, and elastic substance, becoming firmer as the animal approaches its maximum of high condition; 8.

THE HAIR, thick, close, and furry; 1.

THE UDDER should be such as will afford the best promise of capacity and product; 1.

COLOR, reds or rich browns, oftentimes very dark, with a white or "brockled" face, are now the colors, and marking of the Hereford, though grey Herefords, or cream-colored, were not uncommon; 1.

Same general remarks in regard to points of the Hereford bull, as made in reference to the Short-Horn.

AYRSHIRES—THE COW.

PURITY OF BLOOD, as traced back to importations of both dam and sire, under such evidence as will satisfy committees; 40.

THE HEAD, as in other breeds, small; the face long and narrow; the muzzle and nose dark; 2.

THE EYE placid and not strikingly large; 1.

THE EAR of full size, and of an orange color within; 2.

THE HORNS small, tapering with an outward and upward turn, and set on wide apart, the face somewhat dishing; 1.

THE NECK of medium length, clean in the throat, very light throughout, and tapering to the head; 1.

THE SHOULDERS lying snugly to the body, thin at their top, small at their points, not long in the blade, nor loaded with muscle; 3.

THE CHEST must retain sufficient width and roundness to secure constitution. The lightness of the fore-quarter, and the "wedge-shape" of the animal, from the hind-quarter forward, arising more from a small, flat and thin shoulder, than from an undue narrowness of the chest; 6.

THE CROPS easily blend in with so thin a shoulder and prevent all hollowness behind; 3.

THE BRISKET not over-loading the fore-end, but light; 2.

THE BACK should be straight and the loin wide, the hips rather high and well spread; 8.

THE PELVIS roomy, causing a good breadth at what is termed the "thurl," or "round-bone," and between the points of the rumps; 4.

THE QUARTERS long, tolerably muscular, and full in their upper portion, but moulding into the thighs below, which should have a degree of fatness, affording thus more space for a full udder. The flank well let down, but not heavy; 6.

THE RINS, behind, spring out very round and full, affording space for a large udder, which by Ayrshire breeders is considered very essential to secure the milking property; the whole carcass thus acquiring increased volume towards its posterior portion; 4.

THE RUMPS nearly level with the back, projecting but little; 2.

THE TAIL thin in its cord, of full length, light in its hair, and set somewhat further into the back than would be admissible with some other breeds; 1.

THE LEGS delicate and fine in the bone, inclining to be short, and well knit together at the joints; 1.

THE UDDER in this breed is of more special importance, as the Ayrshires have been bred almost exclusively with reference to their milking properties. The great feature of the udder should be capacity without being fleshy. It should be carried squarely and broadly forward; show itself largely behind. As it rises upward it should not mingle too immediately with the muscle of the thighs, but continue to preserve its own peculiar texture of skin—thin, delicate and ample in its folds. The teats should stand wide apart, and be lengthy, but not large and coarse; 6.

THE HANDLING will show the skin to be of medium

thickness only, moving freely under the hand and evincing a readiness in the animal to take on flesh when a drain on the constitution is no longer made by the milk-pail; 4.

THE HAIR soft and thick, in the phraseology of the country, woolly; 1.

COLOR, varies—a dark red—a rich brown—a liver color, or mahogany, running into almost a black; those very much broken and spotted at the edges on a white ground are the favorite colors at the present time. The light yellow is, however, a color sometimes found on very good cows, but these pale colors are objected to from an impression that such belong to animals of less constitution; 1.

CARRIAGE should be light, active, and even gay; this latter appearance is much promoted by the upward turn of the horn; 1.

Same general remarks in regard to points of the Ayrshire bull, as made in reference to the Short-Horn.—[Boston Cultivator.

Shanghai Chickens—Henology.

MR. EDITOR:—As the hen-fever is getting up pretty high, up this way, and some of the symptoms are beginning to show themselves on my good wife, by occasionally hinting about eggs, chickens, hen-houses, &c., I thought I would ask a few questions of you, before dipping into the business, as you know, or ought to know, that we expect editors to be able to answer all questions.

Now what do you think of the variety called *shank-high*, whose name don't belie them? I tell my wife they ain't got no body at all, and that when the head is cut off the legs come right apart,—am I right? She says, neighbor Buckingham's wife told her, that they were the beatnest things to lay on the yearth, and that they'd sit and lay both at onst. I don't believe it, because it is contrary to nater. I think they only recline a little, as it were, and—Jerusalem! how can them things set! my jack knife can set as well as they can. And, I tell you, Mr. Editor, they put things out of joint too, dreadfully. When neighbor Buckingham's wife got her *Shank-highs*, home the other day, old Kink happened to hear the rooster crow for the first time, and not knowing anything about the matter, summoned half the niggers on the place to come and help get the old blink-eyed mule out of the crib. Judge of the exhibition of teeth and white eyes, on ascertaining the truth. Old Kink says dey don't sit on de roost same as udder chicken no how, but dey sits straddle of de stick, cause why, when dey 'tempts to sit same as common chicken, de head ain't hebby 'nuff for de legs, and dey falls off backwards. Correct philosophy that. They sit when they eat, I know, for I've seen 'em do it: and I've seen 'em try to eat standing, but its no go, for when they peck at a grain of corn on the ground, they don't more'n half reach it, but the head bobs right between their legs, making them turn a complete somerset. They may be like a swung cat,—*worse than it looks*, and that's bad enough, any how. I'd as soon see a pair of tongs or compasses walking about the yard as these *Shank-highs*. And I had like to have forgot to tell you, that Pete says they are great liars, cause dey crows long time fore day in de morning, when 'tain't day. Kink says, Pete don't 'flect dat dey legs is so long, dey see daylight a long time 'fore common chicken.

With all the advantages and disadvantages, I am at a stand what to do; to get or not to get, that's the question. What say you?—[Farmer & Planter.

MOHAWK.

The Milk Trade of New York and Vicinity.

The following chapter from Dr. Trall's work on the milk trade of New York will be found well worth a perusal. In his introduction the Dr. makes the startling announcement, that *eight or nine thousand* children die annually in the city of New York from diseases caused by the use of impure milk. Incredible as this statement may seem, at first thought, it becomes too painfully apparent, in glancing at the array of facts set forth in this little book. "In hundreds of cases," says the Doctor, "the symptoms of poisoning by swill milk are so obvious, that physicians at once impute the disease to this cause, and prohibit the use of milk entirely. And to this abstinence from bad milk are the patients mainly indebted for their recovery. In my own practice I have every year grown more suspicious of distillery milk, whenever I have seen a child presenting a sickly appearance, loose, flabby flesh, weak joints, capricious appetite, &c. * * * This assemblage of symptoms is often attributed to worms; but my experience has fully satisfied me that slop milk is much more frequently the cause. I have known these symptoms defy all medication until the milk part of the diet was entirely abandoned."

We have already stated that the swill milk daily consumed in this city, Williamsburg, Brooklyn, and Jersey City equalled about two thirds the quantity of the pure country article, that is, near one hundred and eighty thousand quarts. This, however, it must be understood, is not produced in New York alone, for there are extensive cow stables in the neighboring cities, from which the city receives large supplies by steamboats. Every morning about three o'clock, the boats upon the different ferries are crowded with milk wagons coming from the "sister cities" to distribute the poison among our people. Some of these vehicles are labeled "Pure Country Milk," "Westchester County Milk," "Orange County Milk," etc., so that those who receive it are under the impression that it is the pure article with which they are supplied. This system of deception, although frequently exposed through the press, is still in fatally successful operation. It is true, that some of the milkmen driving these wagons do supply their customers with excellent milk, but the number is very small when compared with those who do not. There was one man engaged in the business who put up a notice that he sold "only pure milk and water," and so implicit was the confidence placed in his word that his business was very extensive.

We have computed, as accurately as possible, the number of cows on this island which are fed upon grain, swill, and other slops, and find them amounting to about four thousand. Of these, more than one-half are kept in stables connected with distilleries, and the remainder are to be found in various sections of the city where stable rent is cheap. Some are as far as three and four miles beyond the city limits, and to these the swill is carried in barrels upon carts. The most extensive distillery in the city is that owned by a Mr. Johnson, at the foot of Sixteenth street, on the North River. It produces more swill than any other in New York, and it is said even more than any other in the United States. Whether this is correct or not, it is not necessary to enquire, but of one thing we are certain, that it

is one of the greatest nuisances which has ever been tolerated by our authorities.

We do not refer to the manufacture of spirits, for with that we have nothing to do in this connection, we simply allude to the production of swill for the use of cattle, and the evils inflicted on the community thereby. Thousands of barrels of this horrible stuff are consumed weekly by the miserable-looking and diseased animals confined in the stables to which we have referred. This, of course, is a source of considerable revenue to the owner of the distillery, whose interest it is to support the sale of the swill milk, and to discountenance that of the pure article from the country. He makes thousands of dollars yearly by this branch of business alone. The price paid for the board of each cow is six cents per day, or about twenty dollars a year, and, estimating the number of cows kept in the Sixteenth street stables at two thousand, the yearly income will be found to amount to forty thousand dollars. This is an immense sum of money, and it would require more than ordinary strength of principle to resign a business so lucrative, from motives of public philanthropy.

The sale of swill, as we have stated, is not confined to the stable in the immediate vicinity of the distillery, but extends even to a distance of three or four miles from the city. Some of our readers, doubtless, have seen the vehicles in which it is carried—heavy lumbering carts, with one or two barrels besmeared with swill and dirt, and emitting a most offensive odor. They are drawn each by one old, broken-down, spavined horse, and occasionally by a team of oxen. Crowds of these carts during swill days may be seen around the distilleries, waiting their turn, and so large is the quantity sold in this way, that a whole day is often consumed in its distribution. The price per barrel is about a shilling, and many thousand barrels are disposed of weekly for the use of cows and pigs.

As the only object of the men who keep these cows is, to turn them to the most profitable account, the expense is curtailed in every possible way. They are allowed no straw for bedding, but a very small quantity of dry feed, consisting of hay and grain, is given them, and the floor on which they are compelled to lie, is generally covered with ordure.

As comparatively little is known of the internal arrangements and general management of these establishments, we will give a description of the one to which we have referred as the largest in the city. This stable is situated at the foot of Sixteenth street, between the Tenth Avenue and the North River. The buildings and ground are owned by Mr. Johnson, the proprietor of the distillery adjoining, from which the cattle are supplied with the swill or slop. There are, properly speaking, three stables running parallel with each other, from the avenue to the river. They were all originally constructed of wood, but it was thought prudent, in consequence of a fire which broke out in one of them about four years ago, and which destroyed a considerable amount of property, to rebuild some of them with brick. Their length is from five hundred to seven hundred feet, and each one is made to contain between six and seven hundred cows. Their appearance outside is any thing but inviting, and the stench can sometimes be perceived at a distance of a mile; but the exterior, disgusting as it is, conveys no adequate conception of the interior.

The cows are ranged in consecutive rows, of fourteen or fifteen to a row, and are separated by wooden partitions which do not extend further than the ani-

mals' shoulders. At the head of each row is the trough which contains the swill, and to one of the boards which forms the frame-work immediately above this, the cows are secured by a rope fastened round their necks. The unfortunate animals are so placed as to be almost constantly over this trough, except when lying down; and even that position, instead of affording them rest, only subjects them to a new torture, for the ground floor of these stables is saturated usually with animal filth. It is almost needless to state that stables kept in this condition cannot be wholesome, and that the atmosphere which pervades them would, of itself, be sufficient to taint the milk, and render it unfit for use. The ceiling is from seven to eight feet high, and generally at one end of the stalls is a small room where the cans, and other utensils required in the business, are kept.

This room serves also the purposes of an office, and although it is something cleaner than the adjoining stalls, it is not free from the stench. As ground rent in this locality is very high, the economy of space is a great desideratum. Thus the same building in which the cows are kept is also used as a stable for the horses employed on the milk routes. They are, however, more carefully tended, get better food, and their stables are kept cleaner. The cows are occasionally fed with hay and grain, but the latter is always mixed with the slops in their trough, and the former is most sparingly distributed. When the swill is first served it is often scalding hot, and a new cow requires some days before she can drink it in that condition. It instinctively shrinks from the trough when the disgusting liquid is poured in, but in the course of a week or two it becomes accustomed to it, and, finally, drinks it with an evident relish. The appearance of the animal after a few weeks' feeding upon this stuff is most disgusting; the mouth and nostrils are all besmeared, the eyes assume a leaden expression, indicative of that stupidity which is generally the consequence of intemperance. The swill is a strong stimulant, and its effect upon the constitution and health of the animal, is something similar to alcoholic drinks upon the human system. Of this swill, each cow drinks about twenty-five or thirty gallons per day, so that the total consumption in the stables is about fifty or sixty thousand gallons. The quantity of milk given upon this food, varies from five to twenty-five quarts daily, that is, in every twenty-four hours.

The cows are milked twice, once at three o'clock in the morning, and once at two or three in the afternoon.

The operation of milking in these stables is as peculiar as it is disgusting. At the appointed time, the man who is specially engaged for this purpose enters the stable with a pail or can, and, raising the cow from the filth in which she has been lying, and with which she is covered, commences the milking process. About eight or ten minutes are generally required to milk a cow, but the time is of course always regulated by the quantity given. An expert hand at the work will milk a dozen cows in an hour and a half, and we are told of one man who performed the task in a still shorter time. There is no article of food which requires more cleanliness in its manipulation than milk. The vessels in which it is contained require constant cleansing; but the men engaged in the swill milk business scorn all such nicety, for with them cleanliness appears to be an exploded idea. Their hands are seldom or never washed before milking, and indeed if they were they would soon be soiled by the cow's udder. In the process it occasionally happens that a lump of dirt

falls into the liquid, when the hand of the milker most unceremoniously follows it and brings it out. The udders of some cows have been known to be afflicted with ulcers, yet even in that condition they were milked, and the milk mixed with the general stock for distribution. These details, disgusting as they are, fall far short of the reality.

The treatment to which the poor animals are subjected is so severe that they often sink under it. When they become diseased, as not unfrequently happens, they are milked up to within one or two days of their death; and when no longer able to stand, they are held up until the process is performed. A friend who was an eye-witness to a case of this kind, informed us that when every means had been tried to make the cow stand, and when kicks and blows proved ineffectual for the purpose, two men sustained, while the third milked her. When their support was removed, she fell to the ground, where she lay till death put a period to her suffering. The milk thus obtained must be infected with the disease of the animal, and, of course, is most deleterious to health. Its fatal effect upon children may be seen in the terrible mortality among the infant population of the city, who subsist almost exclusively upon milk.

The quantity of milk furnished daily by the cows in Johnson's stables is about twenty-four thousand quarts, but it is increased to thirty thousand by the addition of six thousand quarts of water. The profits accruing from this are very large. Estimating this milk at five cents per quart, the price at which it is sold, its total value will be found to amount to \$1,500. This may exceed the real receipts by one or two hundred dollars, for it is impossible to arrive at an accurate estimate without an inspection of the account books. Allowing twelve quarts of milk as the daily average yield of each cow for nine months, we find that the receipts from the sale of milk of a single animal amount to about \$160 in that period. About \$40 more is made by the water with which it is diluted, and which is generally added in the proportion of one-fourth.

This increases the amount to about \$200, from which a large profit is obtained after the deduction of all the expenses. These expenses are comparatively trifling upon a milk dealer who has as many as eighty or a hundred cows, very few of them having less than twenty. The loss by the death of cattle is sometimes very heavy, as many as eight or ten dying in one week. On a recent visit to Johnson's stables the writer saw two lying dead outside of the stables, exposed to the view of the public, and not far from these were two others which had been turned out to die. One had fallen over on its side and was in the last agonies of death, and the other was making vain attempts to stand up. Such scenes are very frequent at this establishment, and may be witnessed almost daily. The stable-men are hardened by association with them, and regard them as the natural concomitants of their business. Of those that are diseased, more than one-half are disposed of to butchers, who can purchase them in this condition at two or three cents a pound less than they pay for healthy meat. If they run dry before becoming diseased, they are fattened (bloated) with a kind of food termed ship-stuff, which consists of mill dust and the worst kind of grain, and sold to such butchers as will buy them.

A large amount of this kind of meat is used by the poorer classes, who never suspect the reason they obtain it cheaper than it is sold elsewhere. The law has made it a misdemeanor to sell diseased beef, and about a year ago several persons were arrested for

its violation, but at present, although the practice is continued, we seldom hear of any arrests being made. It is not very difficult to detect this meat; it has a peculiarly bluish appearance, and becomes putrid in a much shorter time than good beef. It also takes more of it to weigh a pound, and when cooked there is less of it.

The cattle that are in Johnson's stables, and in fact in all that we have ever visited, are seldom or never allowed to leave them. They are constantly breathing the fetid atmosphere of their prisons, their teeth rot out of their jaws, their hoofs grow to an unnatural length, and turn up something similar to the point of a skate. These are the marks by which a stop-fed cow is generally known, and it is impossible to mistake them. Sometimes the hair falls off, ulcers break out in various parts of the body, and the hoofs become so sore as to render the animal quite lame and unable to stand. It is melancholy to see some of the poor creatures, when they are so fortunate as to get out of their pens for an hour or two, attempting to walk.

Kicking Cows.

In my private letters from my venerable friend, DAVID THOMAS, I often find valuable scraps, like the one below, which I can detach from the correspondence without breach of confidence.

When I was in the habit of milking half a dozen or more cows myself, (which, maugre the M. D., I did, till recently,) I tried the plan detailed below, on the vicious kickers, and found it to answer admirably. One blow on the cow's leg followed every kick until a cure was effected.

It should be borne in mind, however, that cows often kick from fear, and still oftener from SORE TEATS. Kindness and care are the remedies then; blows only aggravate the mischief.—[Prairie Farmer.

J. A. K.

A PERVERSE ANIMAL SUBDUED.—A late article on Kicking Cows, in the Albany Cultivator, has reminded me of a story that was told nearly fifty years ago, by a worthy Englishman, with whom I was intimate. An itinerant was at a nobleman's to exhibit feats of horsemanship, and the people had collected from far and near, among whom was my friend. When the man had done with his own horses, he turned and said "Now, my lord, I am willing to ride any horse of yours in the same manner." Having one remarkably stubborn, the nobleman, to have some sport, told a groom to bring her out. The stranger then deliberately mounted, and urged her to move, but not one step would she stir. After a pause, he quietly dismounted, gave her one severe stroke with his whip, and again resumed his seat in the saddle. The mare continued immovable, but the man preserved his temper, and got down quietly a second time, repeating the blow, but with no better success. After the third stroke, however, she was completely subdued, and moved forward with perfect obedience.

It now became evident that the design of the horseman was, to give the animal time to associate the idea of her disobedience with the stroke that followed. When this was established, she was willing to move.

On the reverse, if a shower of blows had been dealt out, as thousands of horsemen would have done, the mare would have no time to reflect, and both she and her rider been roused into fury. With good temper, great savings might be made in the article of whips.

Coal Ashes.

MR. EDITOR:—In your weekly paper of 12th June, I notice an inquiry from a correspondent, "whether coal ashes can be used with any benefit in agriculture?" And as I have not seen a reply to this question in any subsequent number of the Farmer, I will venture to give my own experience in the matter, small though it may be.

About the year 1840, while publishing the Farmer's Gazette, at New Haven, I found a heap of anthracite ashes in my garden in the spring—the accumulated siftings from two stoves during the previous winter. Having seen the suggestion in some agricultural paper, that these ashes were of some value as a fertilizing agent, it occurred to me that I might try the experiment without cost. Accordingly, when about to commence the operation of gardening, I spread the ashes over the surface of the garden, as evenly as possible. There were some two or three cart loads of them, and they had lain in a snug heap near the centre of a small garden of not more than four or five rods square. Across the spot where the heap had lain, I had a bed of common blood beets, and a few rows of string beans.—The general effect of the ashes on all parts of the garden was evidently good; but on the particular spot which had been occupied by the ash heap, the result was really surprising. The growth of beets and beans, in that part of the beds, was nearly double that of the same vegetables beyond the limits of the heap. So marked was the difference, that it was prominently perceptible to the eye as far as the garden could be seen. The soil at New Haven, as you are probably aware, is a light sand.

I have no doubt that coal ashes are worth something as a fertilizer; and that on farms within two or three miles of any of our New England cities, they will pay for carting. Generally, I suppose, householders in cities will be glad to give them to any person who will take them away. I think of trying their virtues on a portion of my mowing, by spreading them either this fall or early next spring; and if they have any material effect, you may possibly hear from me again.—[New England Farmer.

Sulphur for Lice on Calves, &c.

The September number of the *Stock Register* quoting from the *Genesee Farmer*, recommended sulphur fed to animals as death to all such vermin. I tried it on some calves, so covered with lice that the outer ends of their hairs were thick with them. Tobacco and other remedies, had but little effect. I fed in salt and meal, giving a spoonful to each calf about twice a week. In two weeks not a louse could be found. A neighbor who has often used the same remedy, on all kinds of animals with perfect success, assures me it should be given in fair weather, or the animals housed, else their is a liability of taking cold and injury being done to the animals.—[Rural New Yorker.

T. E. W.

IMPORTATION OF CATTLE.—The cattle growers of Madison county, Ohio, says the Cleveland Herald, have organized a cattle importing company, the capital stock, \$10,000, all taken. The company will shortly send one of their number to England, to make selections and purchases. A similar company is being formed in Indiana, with a capital of \$20,000.

Stowell's Evergreen Sweet Corn.

He who expects to find this article of corn as much superior to the common kinds, as the ambrosia of the gods was to the food of mortals, will lay down his cob and pick his teeth in disappointment. He will rise from the table and call it a humbug.—The fact is, he who has good sweet corn upon his table, picked at the right time, and well cooked, has an epicurean dish that he might ask any sensible god in the Mythology to partake of, without fear of refusal. Should some German commentator upon classic lore undertake to prove that this was the veritable ambrosia, it would be difficult to disprove the position. The man who does not appreciate sweet corn as a standard of gustatory excellence, is not the man to appreciate any edible. But, were the Stowell's decidedly superior to all other kinds for the table, we should not expect to have the multitude believe, even after they had tried it. We have heard a very sensible man assert that the common field pumpkin made as good pies as the marrow squash, of Boston notoriety. From that date our faith was very much strengthened in the old adage, "There is no use in disputing about tastes." If this new variety of corn is as good as the old for the table, and has other excellences that the old does not possess, it will prove an acquisition.

It has been introduced to the agricultural public mainly through the agency of Professor Mapes, who has sent out thousands of samples of the seed to the readers of his paper in various parts of the country. He gives the following account of its origin in his paper for December, 1850:—"Stowell's sweet corn is a new sort, and is every way superior to any other we have seen; for, after being pulled from the ground, the stalks may be placed in a dry, cool place, free from moisture, frost, or violent currents of air, (to prevent drying,) and the grains will remain full and milky for many months. Or the ears may be pulled in August, and by tying a string loosely around the small end, to prevent the husks from drying away from the ears, they may be laid on shelves and kept moist and suitable for boiling, for a year or more. This corn is hybrid, between the Menomony soft corn and the northern sugar corn, and was first grown by Mr. Nathan Stowell, of Burlington, N. J. Near the close of the Fair of the American Institute, 1850, I presented the Managers with two ears, pulled in August, 1849, and twelve ears pulled in 1850. They were boiled and served up together, and appeared to be alike, and equal to corn fresh from the garden.

"The ears are larger than the usual sweet corn, and contain twelve rows. To save the seed, it is necessary to place the ears in strong currents of air, freed from most of the husks, and assisted slightly by fire heat when nearly dry. In damp places this corn soon moulds, and becomes worthless. The seed when dry, is but little thicker than writing paper, but is a sure grower. The stalks are very sweet, and valuable as a fodder."

A writer in the Rural New Yorker tried it in 1851, and speaks thus of it:—"Until it began to tassel out, it appeared very much like enormous broom corn, and exhibited no symptoms of putting forth ears until very late in the season, when it eared rapidly and bore three very large, full ears on all the best stalks, and in some cases the fourth was fairly set. Only a very few of the stalks bore single ears. It matured rapidly and very perfectly; but it was many weeks after frost set in, and the corn was housed, and after the husks had become entirely white, be-

fore any of the kernels presented the shrivelled appearance of sweet corn.

"That it will do all that has been said of it I have no reason to doubt, as far as my observation through one season extends. I am satisfied it is a most valuable acquisition to our sweet corn. It grows freely, is of the first quality, and produces in my garden this season far beyond any corn I have yet seen. Besides the greater number of grains on a stalk, each ear and kernel is very large, although it dries down for seed to a very small ear and kernel. Very few of the ears have less than fourteen rows, and I have just noticed an ear of it only seven inches long, and yet it had sixteen rows, and contained more than eight hundred kernels. The day I planted this corn I planted an equal number of hills of a very superior kind of sweet corn, the kernels of which most perfectly resembled this; and although the exposure and soil were equal, yet the Stowell corn surpassed it in every respect. I shall try it another season with increased interest."

Another writer in the same paper gives us his experience for 1852: "When I read of the wonderful productiveness and keeping quality of this new kind of corn, I rather regarded it as a humbug. However, I bought a gill of seed for twenty-five cents, and planted it, May 25th, in rather an unfavorable spot for late planting. But it matured in good time, and produced from three to seven perfect, good ears on a stalk; and one stalk had on it sixteen—the shortest about two inches, but well filled out, and all ripe enough, and good for seed. I wish to record my vote in favor of the evergreen corn, *that it is no humbug.*"

I will add to these trials of the article my own experience for the last two seasons. I procured a few seeds from the office of the Working Farmer, in New York, in the spring of 1851. I planted them late, but owing to the drought only six kernels came up. I had eighteen perfect ears from these six kernels, and two imperfect ones. This showed the corn a very superior bearer. The growth of stalks was large.

I had now seed enough to plant about one-third of an acre, after giving away some to friends. The soil was badly exhausted by cropping, and was not highly manured. But the growth of stalks was large, and the yield of corn was satisfactory; though the season was one of great drought, and corn suffered much throughout the country. Some of the stalks had three ears, and many of them two, with settings for more, showing what it had a mind to do, if the soil had been in better heart, and the season more propitious. I have no doubt that in very rich soil there will be often three ears upon a single stalk, and some stalks of twice that number. We may then set down the advantages of this sweet corn, as mainly the following:

1st. Its exquisite flavor is not injured by the hybridizing, as has been the case with other attempts at crossing the sweet corn with other varieties.

2d. It secures a very much larger yield of corn. The number of rows upon an ear varies from eight to twenty. A very large proportion of them are twelve and upward. Most of the large ears have from four hundred to eight hundred kernels upon them. Then we have more ears upon a stalk.

3d. It prolongs the season of green corn until frost comes; and if it be pulled up by the roots and sheltered, it lengthens it until freezing weather.

4th. If you have a fruit room where you can command the temperature, you can have green corn the year round on the cob. But as we have no such

room, we have not tested the corn in this respect.

5th. It furnishes the largest amount of fodder of any kind of corn grown in the North. Prof. Mapes says, "The Stowell corn when thickly sown will yield double the burden of stalks and leaves of any other corn we have tried. It is more easily cured, and preferred by cattle even to the best English hay."

The only drawback to be apprehended, and this perhaps is imaginary, is the danger of its crying back to the original from which it was produced—a danger that is common, I believe, to all hybrids, until long cultivation has fixed their peculiarities.—Whether the variety of rows that the different ears assume is any indication of a relapse, the experimenter must judge for himself. I have full confidence in the article, and believe it a great acquisition to the garden and the farm.—[Plough, Loom and Anvil. W. CLIFT.

Stonington, Ct., January 17th, 1853.

A Fine Orchard.

One of the finest orchards in America is that of Pelham farm, at Esopus, on the Hudson. It is no less remarkable for the beauty and high flavor of its fruit, than the constant productiveness of trees. The proprietor, R. L. Pell, Esq., has kindly furnished us with some notes of his experiments on fruit trees, and we subjoin the following highly interesting one on the Apple.

"For several years past I have been experimenting on the apple, having an orchard of 2,000 bearing Newtown Pippin trees. I found it very unprofitable to wait for what is termed the "bearing year," and it has been my aim to assist nature, so as to enable the trees to bear every year. I have noticed that from the extensive productiveness of this tree, it requires the intermediate year to recover itself—to extract from the earth and the atmosphere the materials to enable it to produce again. This it is not able to do, unassisted by art, while it is loaded with fruit, and the intervening year is lost; if, however, the tree is supplied with proper food it will bear every year; at least such has been the result of my experiments. Three years ago, in April, I scraped all the rough bark from the stems of several thousand trees in my orchards, and washed all the trunks and limbs within reach with soft soap; trimmed out all the branches that crossed each other, early in June, and painted the wounded part with white lead, to exclude moisture and prevent decay. I then, in the latter part of the same month, slit the bark by running a sharp pointed knife from the ground to the first set of limbs, which prevents the tree from becoming bark bound, and gives the young wood an opportunity of expanding. In July I placed one peck of oyster shell lime under each tree, and left it piled about the trunk until November, during which time the drought was excessive. In November the lime was dug in thoroughly. The following year I collected from these trees 1700 barrels of fruit, part of which was sold in New York for four, and others in London for nine dollars per barrel. The cider made from the refuse, delivered at the mill two days after its manufacture, I sold for three dollars and three quarters per barrel of 32 gallons, exclusive of the barrel. In October I manured these trees with stable manure in which the ammonia had been fixed, and covered this immediately with earth. The succeeding autumn they were literally bending to the ground with the finest fruit I ever saw, while the other trees in my orchard not so treated are quite barren, the last season having been their bearing

year. I am now placing round each tree one peck of charcoal dust, and propose in the spring to cover it from the compost heap.

My soil is a strong, deep, sandy loam on a gravelly subsoil. I cultivate my orchard grounds, as if there were no trees on them, and raise grain of every kind except rye, which is so very injurious that I believe three successive crops of it would destroy any orchard younger than twenty years. I raised last year in an orchard containing 20 acres, trees 18 years old, a crop of Indian corn which averaged 140 bushels of ears to the acre."—[Downing's Fruit Book.

Strawberries.

BY WM. R. PRINCE, FLUSHING, N. Y.

I have perused the notices of many varieties of strawberries in your journal for previous months, and in other periodicals, but have not seen any satisfactory and conclusive details, such as would impart to the reader the full knowledge requisite to make his selections *understandingly and with absolute certainty*. Some excuse may be alledged in consequence of the last season having been particularly unfavorable, and of the limited period that has in most cases been devoted to these investigations. I shall not in the present article discuss the subject of sexuality and relative productiveness, but will leave that for a future communication, and confine myself in this solely to describing the characteristics of a number of varieties, so as to enable amateurs who are not already conversant therewith, to make appropriate selections for the objects they have in view—be it as regards large crops for market, or for plentiful family use, or for insignificant crops to merely gratify the fancy. The varieties which have an asterisk attached were originated by myself from seeds during the last eight years. r denotes the pistillate varieties. n and r denote those varieties which combine plants of each sex, and all the others are hermaphrodites or bisexual, and may be used as fertilizers.

*1. *Le Baron*.—Vigorous growth, very large, dark scarlet fruit, sweet, rich, melting. Highest flavor of all, and very productive.

*2. *Triumph*.—Fine large fruit on strong stems, beautiful color, very productive. This is a seedling from the *Early Scarlet*, and a great improvement on it, being twice as large, and thrice as productive, and very valuable. It sometimes produces a partial crop in autumn.

*3. *Charlotte*.—Rather large, dark scarlet, delicious sprightly flavor, productive, but with very short peduncles. r.

*4. *Superlative*.—Medium size, being the same as *Burr's New Pine*, of which it is a seedling, but is more vigorous and more productive than its parent. Berries light scarlet, of a rich and spicy flavor. r.

*5. *Coronation*.—Very large, bright scarlet, ovate, tart but pleasant; on strong peduncles. Estimable.

*6. *Magnifique*.—Very large, orange scarlet, rounded, very productive. r.

*7. *Monstrous Swainstone*.—Vigorous foliage, very large scarlet berries, delicious flavor, productive.

*8. *Maximus Swainstone*.—Very large, deep crimson, high flavor, moderate bearer.

*9. *Twice-Bearing Swainstone*.—Early, medium size, scarlet, oblong cone, rather acid. Very productive. Second crop in September.

10. *Merveille (Peles)*.—Very large, scarlet, oblong cone, beautiful, rich and high flavored. Good bearer. This is the largest and most celebrated French variety.

*11. *Primate*.—Large, deep scarlet, beautiful, very productive. A good fruit for market, of vigorous growth and luxuriant foliage.

*12. *Crimson Cone*.—Fair size or rather large, oblong cone, bright crimson, beautiful, rather acid without sugar, the seeds deeply embedded. It is of a very vigorous growth, and very productive. P. There is a hermaphrodite variety which is less productive, but which should be used as a fertilizer for the pistillate.

*13. *Primordian*.—Resembles its parent, the *Crimson Cone*, but is much earlier. It is very productive, but the fruit is rather soft for carriage to market. P.

*14. *Crimson Pine*.—Large, conical, deep scarlet or crimson, sweet, rich. Very productive. H and P.

*15. *Cornucopia*.—Very large, scarlet, conical, beautiful good flavor, firm, suitable for market. A seedling of the *Hudson*. P.

*16. *Cluster Hudson*.—Fair size, conical, scarlet. Very productive. P.

*17. *Champion*.—A splendid seedling from the *Montevideo Pine*, very large scarlet oblong cone. A fair bearer for this class, and ripening gradually for three weeks. The growth is vigorous.

*18. *Estelle*.—Secondary size, crimson, conical; productive; peculiar flavor. H and P.

*19. *Profuse Scarlet*.—Same size and color as *Large Early Scarlet*, and much resembles it; of fine flavor, and produces twice the quantity of fruit, resulting from its sexuality. P.

*20. *Sylphide*.—Very large, light scarlet, rounded or short cone, beautiful, excellent flavor, productive.

*21. *Spiral*.—Good size, elongated cone, pleasant flavor. Usually produces a second crop in September.

*22. *Tivoli Scarlet*.—Very large, oblong cone, beautiful. Estimable. Very productive. P.

*23. *Unique Scarlet*.—Purse shaped, light scarlet, rich flavor, moderate bearer.

*24. *Bishop's Orange*.—The true variety is round, of moderate size and beautiful orange scarlet color, not highly flavored but a profuse bearer, and particularly desirable as one of the later varieties that follow the general crop. There is a spurious variety cultivated at Rochester and at Boston under this name, which we published in our rejected lists many years since. P.

*25. *Boston Pine*.—Large and splendid, of beautiful color and fine quality. It will produce a fair crop on a strong soil, if kept free from runners. It is one among the many important acquisitions for which we are indebted to the Messrs. Hovey, of Boston.

*26. *Hovey's Seedling*.—It is almost superfluous to describe this very large and splendid crimson variety. The foliage is broad and luxuriant, not as tall as most other varieties. The berries are rather dark colored for a market fruit, and vary greatly in size at the different pickings, and they are not so highly flavored as the preceding variety. It is, however, so large and productive, that few will be willing to dispense with it. P.

*27. *Huntsman's Pistillate*.—A seedling of *Montevideo Pine*, very large, short cone or rounded, bright scarlet, indifferent flavor. Very productive. P.

*28. *Triumphant Montevideo*.—Monstrous size, ovate, deep scarlet. A fair bearer for this class, which ripens its fruit gradually. There are several other fine varieties known as the *Colonia*, *Cordova*, *Parana*, &c.

*29. *Crescent Seedling*.—This being newly introduced from the South, its merits as regards a Northern climate require further trial. The plants have not as yet shown any perpetual character here. *Hovey's Seedling* has proved equally as perpetual or long-

bearer at the South as the *Crescent*, the climate apparently imparting that character.—[Horticulturist.]

Upland Cranberries.

At length we have ocular proof of the fact, that cranberries in the greatest perfection, can be raised on upland, shady and gravelly soil. Mr. Joseph Orcutt has brought us for exhibition, a large root of cranberry-vine, placed in a box, which is made to contain a quantity of the soil from which it had been removed, the vine thickly hanging with ripe fruit. He made the experiment three years ago last May, planting forty bunches in a row two feet apart, without previous culture, merely by removing the sod, and planting the cranberries with no more trouble and attention than he would have taken with a cabbage plant.

The soil is a sandy gravel, fit for peach trees, and of which five hundred and twenty-three are growing in an orchard so near as to shed their leaves on the cranberry vines.

The first year he picked about a pint of fruit, the second year, four quarts, the third, or present year, from seven to eight quarts of remarkably fine fruit. The vines have shot the present season, three feet six inches in length, are suprisingly strong and healthy, and the old wood is loaded thickly with the finest berries.

We now consider the question, "Can cranberries be cultivated with success on upland?" as decided in the affirmative.—[Boston Cultivator.]

Select Fruits.

The descriptions of the following choice varieties of Cherries and Plums, are from "Downing on Fruit Trees."

Among the long array of names, these have proven to be especially worthy of cultivation. We shall continue in future numbers, engravings of our best and most desirable fruits, so as to make the *Farm Journal* a book of reference to those about to plant orchards, and commence Fruit Culture, as a systematic branch of business. This regular feature of our *Journal* has been received with much favor, and will be a great aid to those not perfectly familiar with proper selections. Farmers, judging from the demand for trees, the present spring, are awakening at last to the importance of growing fine fruit, not merely as an indispensable part of domestic economy, and family use, but for marketing. No use can be made of land, in our opinion, which will be so profitable. Those who have dairy farms, and attend markets regularly, are particularly interested in cultivating fruit of all kinds, to go along with their butter, poultry, &c. A large proportion of marketing in the vicinity of Philadelphia, goes by railroad, and a few bushels of Bartlett Pears, choice Plums and Cherries, &c., in addition to what is usually taken, will but slightly increase the expense, and only on account of the additional weight. We have known farmers to sell Bartlett Pears readily at their stalls at 50 cents per half peck, and other smaller fruits, a succession of different kinds kept up, at prices which show in

the year's accounts, quite a handsome sum. By the time this number of the Journal reaches our readers, the planting season for Fruit Trees will have passed. If it has not been improved, let the resolution be formed, and the ground prepared by Potatoes or other hoed crops and good fencing, for planting in the fall.

Plans for orchards, selection of varieties, &c., should be prepared and well digested; memorandums made, before the planting season comes round, when it often finds one hurried and unprepared.

CHERRIES.

Fig. 1.—BLACK TARTARIAN. This superb fruit has already become a general favorite in all our gardens; and in size, flavor and productiveness, it has no superior among black cherries. It is a Russian, and West Asian variety, introduced into England about 1796, and brought thence to this country about twenty years ago. It is remarkable for its rapid, vigorous growth, large leaves, and the erect habit of its head.—The fruit ripens about the middle of June, a few days after the Mayduke.

Fruit of the largest size, heart-shaped, (sometimes rather obtuse,) irregular and uneven on the surface. Skin glossy, bright purplish black.—Flesh purplish, thick, (the stone being quite small,) half-tender, and juicy. Flesh very rich and delicious.

Figure 1.

Fig. 2.—YELLOW SPANISH, BIGARREAU, GRAFFION. This noble fruit is the *Bigarreau par excellence*, and is unquestionably one of the largest, most beautiful and delicious of cherries. It was introduced into this country about the year 1800, by the late William Prince, of Flushing, and has been very extensively disseminated under the names of Yellow Spanish, Graffion, and Bigarreau. The tree is short but thrifty in growth, making strong lateral shoots, and forming a large and handsome head with spreading branches—and it commences bearing abundantly and regularly even while young. Its very large size and beautiful appearance, together with the firmness of its flesh renders it a very valuable variety to cultivate for market. Figure 2.

Fruit very large, and of beautiful waxy appearance, regularly formed, obtuse heart-shaped, the base a good deal flattened. Stalk stout, nearly two inches long, inserted in a wide hollow. Skin pale whitish

yellow on the shaded side, bordered with minute carmine dots and deepening into bright red finely marbled on the sunny side. Flesh pale yellow, quite firm, juicy, with a rich, sweet, and delicious flavour if allowed fully to ripen. In perfection the last of June.



Figure 3.

what firm at first, but becoming nearly tender, juicy, with a very rich and luscious flavor, not surpassed by any large cherry known. Ripens about the middle of June, or directly after the Mayduke.

Fig. 3—ELTON. The Elton, a seedling raised in 1806, by the late President of the London Horticultural Society; is certainly one of the first of cherries in all respects. Its large size, early maturity, beautiful appearance, luscious flavor, and productiveness, render it universally esteemed. It is a cross-bred variety raised from the *Bigarreau* or *Graffion* with the *White Heart* for its male parent. The trees grow very vigorously, and are readily known, when in foliage, by the unusually dark red color of the footstalks of the leaves.

Fruit large, rather pointed, heart-shaped. Skin thin, shining pale yellow on the shaded side, but with a cheek next to the sun delicately mottled and streaked with bright red. Stalk long and slender. Flesh some-

PLUMS.

JEFFERSON PLUM. Fig. 4.— If we were asked which we think the most desirable, and beautiful of all dessert plums, we should undoubtedly give the name of this new variety.—When fully ripe, it is nearly, shall we not say *quite*—equal in flavor to the *Green Gage*, that unsurpassable standard of flavor. But when we contrast the small and rather insignificant

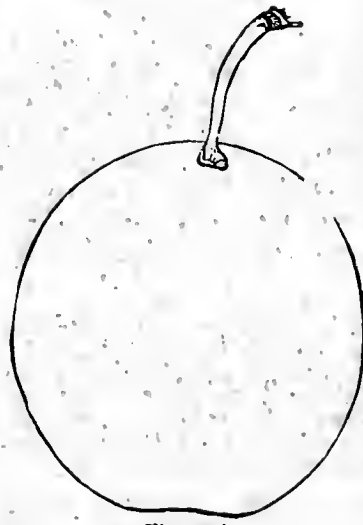


Figure 4.

appearance of the *Green Gage*, with the unusual size and beauty of the *Jefferson*, we must admit that it takes the very first rank. As large as the *Washington*, it is more richly and deeply colored, being dark yellow, uniformly and handsomely marked with a fine ruddy cheek. It is about ten days or a fortnight later than the *Washington*, ripening the last of August, when it has the quality of hanging long on the tree, gradually improving in flavor. It does not, like

many sorts, appear liable to the attacks of wasps, which destroy so many of the light colored plums as soon as they arrive at maturity.

We received the Jefferson Plum a few years ago, from the late Judge Buel, by whom it was raised and named. The original tree is still, we believe, growing in his garden near Albany. It is a good and regular bearer, and the crop is very handsome upon the tree.

Branches slightly downy, leaves oval, flat. Fruit large, oval, slightly narrowed on one side, towards the stalk. Skin golden yellow, with a beautiful purplish-red cheek, and covered with a white thin bloom. Stalk an inch long, pretty stout, very slightly inserted. Suture indistinct. Flesh deep orange, (like that of an Apricot,) parts freely, and almost entirely from the stone, which is long and pointed; very rich, juicy, luscious and highly flavored. Hangs a fortnight on the tree.

BOLMAR'S WASHINGTON. Fig. 5. The Washington undoubtedly stands higher in general estimation in this country, than any other plum. Although not equal to the Green Gage and two or three others, in high flavor, yet its great size, its beauty, and the vigor and the hardness of the tree, are qualities which have brought this noble fruit into notice every where. The parent tree grew originally on Delancey's farm, on the east side of the Bowery, New York, but being grafted with another sort, escaped notice, until a sucker from it, planted by Mr. Bolmar,* a merchant in Chatham street, came into bearing about the year 1818, and attracted universal attention by the remarkable beauty and size of the fruit. In 1821, this sort was first sent to the Horticultural society of London, by the late Dr. Hosack, and it now ranks as first in nearly all the European collections.

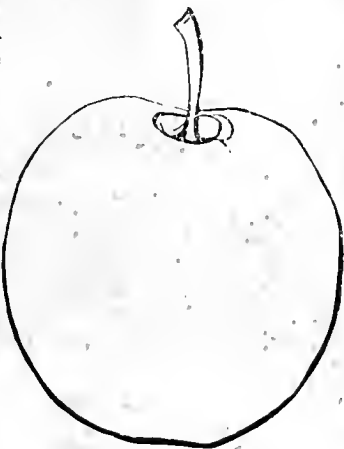


Figure 5.

The Washington, large, broad, crumpled and glossy foliage, is a strong grower, and forms a handsome round head. Like several other varieties of plum, the fruit of this especially in sandy soils, does not attain its full perfection until the tree has borne for several years. We have measured them very often six inches in circumference, and once from Mr. Bolmar's original tree, seven and a quarter inches.

Wood light brown, downy. Fruit of the largest size, roundish oval, with an obscure suture, except near the stalk. Skin dull yellow, with faint marblings of green, but when well ripened, deep yellow, with a pale crimson blush or dots. Stalk scarcely three-fourths of an inch long, a little down, set in a shallow, wide hollow. Flesh yellow, firm, very sweet and luscious, separating freely from the stone. Stone pointed at each end. Ripens from about the middle to the last of August.

*Which he purchased from a market woman.



Deodar Cedar.

The Deodar Cedar, a native of the high mountains of India, and found at an elevation of 7 to 14,000 feet, is one of our acquisitions from abroad, which maintains its foremost place as an ornament to the Park and arboretum, while many others coming into the country, with a high reputation, have grown more or less into disfavor. The Deodar, of which our engraving is a specimen, thirty feet high, is perfectly hardy, and quite a rapid grower. These are two great desiderata. Then again it maintains its color at all seasons, having the advantage in this particular of the Cedar of Lebanon, and others which become of a dingy, brown hue in winter. We regret to observe this latter to be the case with *Cryptomeria Japonica*.

The foliage of the Deodar is quite peculiar, being of a silvery green color, its habit pendent, graceful, and with its rich, luxuriant foliage, forms one of the most picturesque, and beautiful objects on a lawn that can be imagined. Its popularity is greatly on the increase, and as it has been tested, in this country for several years, can now be recommended with great confidence. Those in our grounds, in the severe winter of 1851 and 52 were but very slightly affected. The wood of the Deodar is valued in its native country for its great durability. We copy below from a late number of the London Gardeners' Chronicle, some appropriate remarks as to the style

of Landscape Gardening, for which the Deodar is best adapted.

"Like the Cedar of Lebanon, the Deodar is chiefly valuable as an element in landscape composition; and its character in relation to this point has hitherto, I think, not been pointed out. The extremely rigid habit of the Cedar of Lebanon, its strictly horizontal branches, and, especially that peculiar flatness of head which is remarkable in older specimens (those at the Chelsea Botanic Gardens, for example) and which painters have so much and so happily introduced into their pictures, combine to render it what may be called an architectural tree; and the comparatively dark hue of its foliage contributes to heighten that character. It is, in fact, singularly adapted for associating intimately with buildings in the Grecian, Roman, or Italian styles of architecture; or, indeed, with any structure in which the lines are principally horizontal. With the Deodar the case is widely different. It is essentially a garden or lawn plant. Its drooping branches, pyramidal or conical form, and the extreme paleness of its almost glaucous foliage, quite unfit it for blending with architectural objects, and demand that it should stand out alone and unaccompanied. Nothing can be more graceful than its appearance, thus isolated, on a lawn or in a park, particularly when in the neighborhood of the darker-foliaged Coniferous plants as in a Pinetum. It is true that, like its kindred Cedar, it is an appropriate ornament in architectural gardening, where it makes a delightful avenue. But it will not bear to be brought too near a house, much less into contact with it, having nothing in its aspect or habit that would at all harmonise with any style of building. Its expression, in short, is the very opposite of that demanded in an architectural accompaniment, and which is so admirably realized in the Cedar of Lebanon.

The Deodar loses nearly all its interest and beauty unless allowed to retain the whole of its branches to the very base, permitting no encroachment from its neighbors without being seriously damaged.—[Edward Kemp, Birkenhead Park."

PHOSPHATE OF LIME.—Mr. Johnson (agent of the State of New York at the London World's Fair), took to England specimens of a deposit of Phosphate of Lime—apparently a true vein, from two to eight feet wide—found on the bank of Lake Champlain, Crown Point, Essex county, N. Y. He presented a sample to the Royal Agricultural Society, by which it was immediately referred to its chemist, Prof. Way, who analyzed it and reported that it contained 30 per cent of Phosphoric Acid, 40 per cent of Lime, combined with Peroxide of Iron, Sand, Magnesia, and a little Potash, Soda, &c. Prof. W. estimated the value of the American Phosphate as about equal to that of its British counterpart.

Soon after Mr. J.'s return to this country, he received a letter from a leading British house engaged in preparing artificial manure, stating that, should the Crown Point mine prove equal to the sample exhibited (as it will) *he was prepared to make an offer for the entire product.* Thus, while not one-tenth of our own farmers residing within a hundred miles of Crown Point know or care for the existence of any such mine, and hardly know what Phosphate means, the British farmers have probably secured the entire deposit, to fertilize their fields three thousand miles away.—[N. Y. Tribune.

Spiraea Prunifolia Flore Pleno.



We give an engraving of a branch of this beautiful spiraea in flower, which will give some idea of its character. It is one of the contributions from Japan, and is a great acquisition to our stock of hardy shrubs. The flowers are pure white, very double, and bloom in clusters very profusely. It answers exceedingly well for forcing in the house, and either there or in the flower garden, with its delicate wreaths of small snow white blossoms, is a most attractive object.

The spiraeas are a very numerous family. Don, in his gardeners' dictionary, enumerates over forty species, and several varieties. The three best we consider to be, the above, with *Reevesii* or *Lanceolata*, and *Douglasii*. *Reevesii* is a native of the Mauritius and China, blooms in the spring, and is also pure white; flowers in umbels, and in both leaf and flower is very striking and beautiful. We consider it the best of the list that we have seen. *Douglasii* is a native of the northwest coast of America, blooms later in the season in panicles, of a rosy lilac color, and is also very pretty. Some spiraeas are indispensable in every good collection of shrubbery, and a succession of bloom may be kept up with them through the season.

WASTE OF FERTILIZING MANURE.—At the meeting of the Farmers' Club, on Tuesday, an article was read by Mr. Pell on the waste of excrement in our city sewers. He said that the subject was of great importance. In our city, with its present population, taking as an average that each person, young and old, yield sixteen pounds, it would supply eight hundred pounds of wheat or rye, with the requisite quantity of nitrogen, more than is necessary for an acre of land. Thus, our city might afford nitrogen, annually, sufficient to raise 480,000,000 pounds of wheat, by adding a small quantity of ashes and bone-dust. The English are as improvident as we are. All the matter in the sewers in London is emptied into the Thames. In New York, 600,000 tons of this excrementitious matter is lost. It was proposed by Mr. Pell to get the proper authorities to try and save this vast amount of fertilizing manure, which was lost in our cities.—[N. Y. Daily Times.

EFFECT OF DEEP PLOUGHING.—A correspondent of the New England Farmer, states that:

"A striking instance of the benefits resulting from continued deep ploughing, was brought to our notice yesterday, on viewing the cultivated ground of A. M. Whipple, Esq., on the banks of the Connecticut river, near Lowell. This land was naturally a light and sandy soil. His men were engaged in gathering in the crop of hay from an extensive field, which yielded more than two tons to the acre. The inquiry arose, by what means was the crop made so abundant, on land so shallow? His answer was, *deep plowing mainly*. That for eight or ten years past, he usually ploughed *twelve inches* deep. That he put on his grounds but a light dressing of stable manure—made no compost whatever—but relied almost entirely on the improvement of the soil, by turning the furrows deep. His crops were quite equal to those we have been accustomed to see on strong land, highly manured." * * "Similar benefits were apparent in the growing crops of corn and oats, in the adjoining lots."

For the Farm Journal.

Agricultural Review, No. 2.

CORN.—The first in rotation is the most important grain crop, the older the sod the better, if well set with natural grasses, mostly limed one year or the fall previous on the sod, or after ploughing, forty or fifty bushels per acre, ploughed about six inches deep, either in the fall, open winter weather, or as soon as the frost is out in the spring. The team for this usually consists of one yoke of oxen, and pair of horses before them, or two yoke of oxen; the time of planting about the 1st of 5th month, (May) previous to which harrow first lengthwise with the furrow, then cross, and re-cross, diagonally, or at right angles; if not well mellowed harrow again, then strike out four and a half feet between the rows, if in drills, and four by four and a half or four, if both ways; if the former, drop three grains every two feet, intending two plants to remain; if the latter, four or five grains to the hill, three or four plant to stand. Some place a handful of compost of hen manure, ashes and plaster, in the hill previous to dropping; this insures an early start; cover with a hoe. A good crop will depend much upon the after culture. As soon as the plants are all fairly up, run the cultivator through twice in a row, then apply plaster, a handful to half dozen hills; this will take about half bushel per acre; hand hoe once, and when about six inches high, thin out to the requisite number; this can best be done directly after a rain, as it disturbs the remaining plants less; at intervals of a week give it three more dressings; some plough it the last time, and pass the cultivator once to harrow out the barks; it may then stand until the labors of harvest, and preparation for fall seeding are accomplished. About this time the grain will be glazed and nearly ripe. It is then cut off about one foot from the ground, with *stalk knives*, and placed in shocks of forty-eight hills each, resting upon horses, formed of two or

more hills, twisted together by the tops; the *stubs* are cut with a hoe, in the mornings before the dew gets off the standing corn, or they are knocked off in the winter, when the ground is frozen. In two or three weeks it will be sufficiently cured to commence husking. Cut the *horses*, throw the shocks down, husk and bind the fodder with straw, into four or five sheaves, to be shocked until the husking is finished, then stacked or ricked by the barn yard. The sound ears are hauled to the crib, leaving soft ones and nubbins to be placed by themselves, for present feeding. Cribbs are usually four and half feet wide by ten high; slats running perpendicular half inch apart, and elevated two feet from the ground, by tinned posts.

SEED.—Varieties of yellow flint, inclining to gourd seed, are universal—the *red cob* is in best repate, a deep grain, fourteen to eighteen rowed, large cob and strong growth of fodder. Previous to planting soak in saltpetre water, one or two days, and roll in plaster. This crop is subject to attacks from the cut worm; best preventive, fall or winter ploughing; wire or heart worm, which, working beneath the surface is difficult to counteract; moles, these may be trapped, and birds—to keep off the latter, some inclose their fields with twine stretched on poles; others scatter loose grain about, after the corn comes up, and until it gets fairly started.

The average yield per acre is fifty bushels; price fifty-five cents, for the last ten years—from actual accounts.

Cost of raising per acre:

Ploughing sod, one and one-fourth day,	\$4 00
Harrowing half day,	1 00
Marking out and planting,	80
Seed,	10
One and half bushel plaster, and putting on,	50
Hand hoeing and thinning,	1 00
Cultivating four times,	2 00
Cutting and shocking,	1 50
Husking, three cents per shock,	1 50
Cribbing, one cent per bushel,	50
Shelling, two cents per bushel,	1 00
Marketing, five cents per bushel,	2 50
One-fifth of 25 loads manure, a \$1,	5 00
Ditto fifty bushels lime, a 15 cents,	1 50
Spreading lime,	50
Fencing,	1 00
Taxes,	50
Interest of \$85,	5 10

Expense,	\$30 00
Fifty bushels corn a 55 cents,	\$27 50
Stalks and cobs,	7 00
Product,	\$34 50
Profit per acre,	\$4 50

The crop is charged with *one-fifth* of the manure

and lime applied during the course, as five crops are removed from the soil.

It is supposed to contain ten per cent of land for fence *materials*, and the labor thereon to be equal to the interest of the investment.

A pair of horses and driver is valued at \$2 per day; a yoke of oxen and driver, \$1; a man, 75 cents, including the keep and board of each.

OATS.—Second in rotation is generally grown, preparatory to Wheat; but were it, not that early sowing of the latter, seems to answer best, and the consequent inconvenience attendant upon removing the corn crop in time for its seeding, this crop would most probably be dispensed with. It is considered an exhauster, and on strong ground is frequently lodged, thereby causing much additional labor, and it is sown two or two and half bushels per acre on the fresh ploughed corn stubble, twice harrowed and rolled; early sowing succeeds best. Seed, common, one sided, and black; the latter gives a heavier yield but are more liable to fall. Time of sowing, Third month, (March,) or Fourth month, (April,) as soon as the ground is in order. Harvested Seventh month, (July.) Average yield per acre, thirty-five bushels; average price, thirty-five cents—for ten years.

Cost of raising per acre:

Ploughing, three-fourths of a day,	\$1 50
Sowing and harrowing,	50
Rolling,	15
Seed, two bushels,	70
Harvesting,	1 00
Threshing, three cents per bushel,	1 05
Marketing, five cents per bushel,	1 75
One-fifth of twenty-five loads of manure, a \$1,	5 00
Ditto, fifty bushels of lime, a 15 cents,	1 50
Fencing,	1 00
Taxes,	50
Interest on \$85,	5 10
Expenses,	\$19 75
Thirty-five bushels oats, a 35 cents,	\$12 25
Straw,	7 00
Product,	19 25
Loss per acre,	50
	C. B.
Birmingham, 4th month.	

For the Farm Journal.

Imported Cattle.

MR. EDITOR:

Your correspondent, H. Shubert, in a late number of the Journal, seems to go against the introduction of imported cattle as "an unfair speculation," and "thinks it has taken money out of farmers' pockets, without any substantial benefit." I beg leave to differ from him on these points entirely, and as I do not own a single pure blood animal, have none for sale, and no interest in any, can speak free

from prejudice. I consider these importations have been of great advantage to the whole country, and that the increase in consequence of them, in the production of both beef and dairy products, have been very great. We are all under great obligations to Mr. Renick, of Ohio, and to General Cadwalader, James Gowen, Dennis Kelley, T. P. Remington, Mr. Twaddel and others, in this section, who have the means, and are willing to pay high prices, and to incur the risks of so doing, which the generality of armers could not afford, to introduce improved stock into the country. The *whole* farming community is ultimately benefited by it. Who that notices the droves of fat and stock cattle, and milch cows, coming here from the West, but *knows and sees* the great improvement in their form and quality within a few years. Many of them show a cross with Durham Devon, or other imported breed, and at the same age, and with *less feed* can be made to weigh some hundred pounds more than the old unimproved native stock. It is a strange notion, indeed, at this time, to talk about the imported stock being of no advantage. I presume Mr. Shubert has no *experience* with them, or he would not venture such a statement. I have fed some part bloods, and know that *less feed* will make *more weight*. We thus gain at both ends. I am aware that the full bred Durham, often makes what the Butcher calls too *fleshy* an animal, having to much predominance of muscle, not sufficiently interlarded with fat; still we are speaking now of using them to improve our native breeds, and my own observation and experience is, that when crossed they improve the latter greatly, giving them more size, greater aptitude to fatten, much finer form, and with less offal; putting the weight on the most valuable parts, and also much easier to be kept in good condition. The heaviest and fattest, and most perfect animals, on record, are the pure Durhams. At the high prices which Mr. Shubert so complains of, there is, however, very little danger of the full bloods being slaughtered for beef, so that its being "dry and coarse" avails nothing in the argument, as we are speaking of them for *improving* our native stock. It is well known that the beef of part blood animals is neither "dry nor coarse," but rich and juicy. Now, as regards their value for milk and butter, it is well known that the pure Durham cows, in this respect have far exceeded any other breed. From my *observation*, the cross with them has much improved our native stock in this particular, at least it is so in this neighborhood; our most productive dairies being those where the cows have a strong cross with the Durham. No doubt there are some *families* of the Durham stock not deep milkers, but better for feeding, and a farmer must select such as suit his purpose, whether for the dairy or shambles. He can be suited in both respects, and has cause to congratulate himself that public spirited gentlemen

have given him the opportunity, by paying high prices for good stock, which perhaps neither Mr. Shubert or the undersigned could afford, or would run the risk of doing.

H. JACKSON.

Philadelphia county.

For the Farm Journal.

George Walker's Premium Crop of Corn.

MR. EDITOR—Sir:

It was well remarked, "before agricultural societies were introduced in any community or State, little indeed was heard of wonderfully redundant crops, because no inducement had yet been given for inflation, or slight of hand measurement." An extravagantly large crop of corn having been reported at the State fair, by Mr. George Walker, of this county, I will, with your leave, offer a few remarks thereon by way of elucidation; and which, sir, you may publish in the Farm Journal if, in your judgment, they will subserve any public benefit.

Messrs. Cope and Chamberlain gave it as their opinion that Mr. W.'s crop would shrink from one-fourth to one-third. From the experience I have had, I think full one-third at least. On, or about the first of December, several years since, I saw some corn in a mill which took my fancy, and I bought the toll of two bushels (six quarts) for seed. After being thoroughly dried it did not look like the same corn; and it had actually shrunk one-fourth. It was one of our earlier kinds; and had it been taken from the cob as soon as it had become hard, its shrinkage would not have been less than one-third. Mr. W.'s corn was in a very green state, much of it only in roasting condition, and was much marred by shelling it. Now we all know that grains in a humid or moist condition will not take a close position in the measure, and the more so in proportion to their being broken. Even for this one-tenth more, I think, ought to be allowed. I have also been informed by one who tested it, that this kind of corn is generally four pounds below standard weight, or one-fourteenth. The above fractions added together make fifty-three one hundred and fiftths, or a trifling more than half to be deducted, reducing the one hundred and sixty bushels to seventy-nine and three pecks!

The judges of corn for our society, of whom Mr. W. was one, reported only one hundred and twenty-five bushels. If I place more confidence in this, I hope no one will feel aggrieved. Applying, then, the foregoing computation, we shall have a mere fraction above sixty-three bushels of merchantable grain to the acre! That those who measured were sincere, and measured as correctly as they could, under the

circumstances, I do not doubt. But surely, grain in the condition which that was, ought never to be reported by measure to any society, nor any where else. This reporting of wind and water as grain (and I can not call it else) will not do; and societies ought, and I sincerely hope they will, raise an effectual barrier against it. There is nothing of which I am surer than this, that those who persist in doing so, will do more injury than benefit.

From the common tenor of remark at home, as well as abroad, neither our soil nor our society are deriving much credit from that crop, how great soever it may have been. The report is not much believed among us; and others have as good grounds for disbelief as any here have. Indeed such are the circumstances, and which I have not room to relate, as to warrant disbelief.

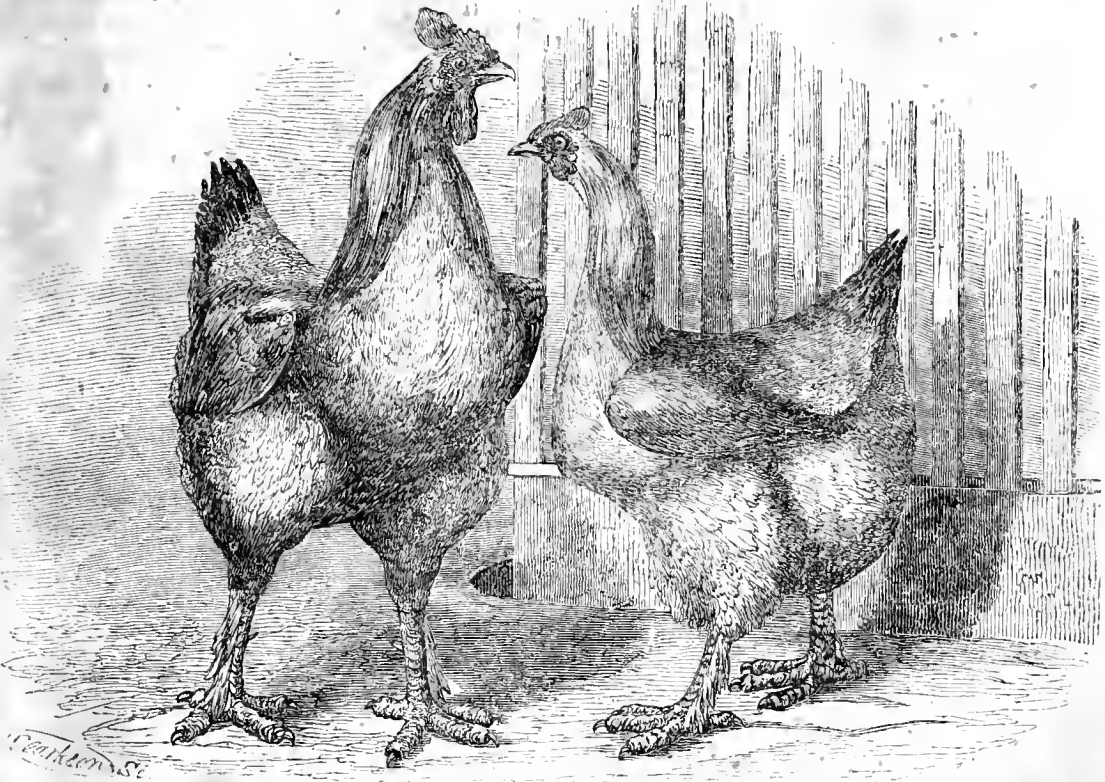
Reason and common sense, as well as justice, demand that, in making up the report of crops, nothing imaginary, inflated, or calculated to mislead, should be admitted—that nothing but absolute measure in *pure dry* grain should be presented. Facts, reliable facts, based upon absolute measurements—such statements as commend themselves to belief—such as embody reality, ever find favor and are listened to with applause: the reverse commands disbelief and disgust, as well it may; and it tends directly to prevent the increase of membership, and to throw back the enterprise.

He who will take the pains to measure some of his corn next season, in the *green* and in the *dry* state, I am sure will be surprised at the difference. I am confident he will not regard my computation as inconsistent then, if he now does.

Forty bushels of corn to the acre is, I believe, by our farmers considered an average crop for our county, more falling below than over going that quantity. There are, however, a very few localities, which, having long enjoyed great natural advantages, by excessive cramming from the barn yard, and extra atmospheric influence, owing to the variation of the season, have produced much more. But he who entertains the belief that four times forty have been raised to the acre, greatly errs. All the sections of our State, as I am informed, have been challenged by a citizen of our county, for corn raising. With all due difference to the gentleman and his opinion, I think he sets our county a little too high. My opinion is, if the farmers of the other counties will but cram *excessively* their best soils, and measure the grain as soon as it is out of the milk—do just as some here have done—other counties can then tell as big, if not bigger, corn stories than Susquehanna has done.

S. A. NEWTON.

Brooklyn, April 2d, 1853.



Cochin China Fowls.

Imported in 1853, by Wm. C. Rudman.

We take great pleasure in offering to the readers of the Farm Journal, the above original and excellent engravings of Shanghai, or Cochin China Fowls, recently imported by Wm. C. Rudman, Esq., of Philadelphia. They were drawn from life, and engraved by E. Clarkson, wood engraver, Philadelphia, and are highly creditable to his skill as a correct artist, and faithful delineator. The portraits of Southdown Buck, and Chester county Boar, in former numbers of the Farm Journal, were also engraved by him, and have been pronounced the best which have appeared in any periodical in this country.

In respect to these Fowls Mr. Rudman writes us, "the artist has made excellent likenesses. They are of the Cochin China breed; the Cock fifteen months old, weighing twelve pounds, and the hen eleven months, weighing 9½ lbs. They were imported—the Cock and two Hens—in the ship *Horatio*, of New Bedford, and arrived in January last, in ninety-seven days direct from Shanghai." They are the pure *cinnamon Buffs*,—and a friend in Philadelphia, who

is well booked up in the present state of the chicken market, says, "they are worth to-day, in London, Five Hundred pounds sterling the trio!" Mr. Rudman informs us that he is "selling the eggs at twenty dollars per dozen, and that nine dozen are already ordered at those high prices." We shall only say, "on our own hook," that, after seeing these fowls, we were forced to concur in the general sentiment that they are the finest specimens of Shanghaies yet imported into the United States. They are well calculated to increase the prevailing epidemic, to a very great extent, and even to affect those, like our correspondent J. K. E., who have heretofore stood impervious to all Fowl diseases. These seem to us to be model specimens of Poultry, and as we survey their broad and prominent breasts, deep and heavy bodies, with small and beautiful necks and heads, we feel for the first time a kind of *chicken heartedness* creeping over us. Although low and very near the ground, as chickens ought to be, they will stand *higher* in the estimation of good judges, than some whose greatest recommendation is that they can eat off an ordinary dining table without *stretching*.

Portraits of Stock.

"The Editors of the Pennsylvania Farm Journal, after discussing pretty sharply the portraits of animals as given in the Agricultural papers, and also in the New York Transactions, announce their determination to tolerate none but faithful portraits; and for this purpose they intend to use only daguerreotypes. Ha, ha, ha! Good friends! If you do not get against a stump before you get far you will be lucky. The Daguerreotype is capable of being the most lying and unfaithful of all processes. You will see better when you get there."

"We copy the above from the Prairie Farmer. Will that paper tell us of *any thing* that is not "*capable*" of being twisted and perverted from its true and proper uses. Where the *object* is to flatter the animal, and not to give a *truthful* portrait, we grant the daguerreotype *may be made* "the most lying and unfaithful of all processes." The fault here is not in the daguerreotype but in the *intent* of the owner. If the object is merely to make a handsome looking *picture*, there is no use in having the daguerreotype, or the animal either. An artist can make a figure of a cow, or bull, or sheep, without seeing either of them before him. When, however, a *portrait* is wanted, and we can conceive of no use in illustrations for agricultural journals unless they are really *portraits*, we contend that twenty artists can be found, who can *copy* from a daguerreotype, for one who, like the late lamented J. A. Woodside, can take a portrait from nature.

We had occasion not long since, to enquire in Philadelphia for an animal painter, and were recommended by several artists to one, who we were told, had a great talent that way, and was the best in the city. We employed him, to draw some well formed, and very neat, improved stock. When finished, their backs were hollow, like the concave of the moon, in her first quarter, rumps sharp and angular, heads coarse and heavy, and such subjects altogether as would be likely to attract, and retain a large flock of crows, in the anticipation of an early repast. When we enquired of him *why* he made such caricatures, we found he had *endeavored* to make them as ugly as possible, as he remarked they looked more "picturesque and rustic like."

Osage Orange Hedges.

We clip the following from the Prairie Farmer, from which it appears in Illinois, the "*Osage Orange Question*," has not proved so difficult to settle, as the "*Strawberry Question*" in some other places. A compact fence against horses, cattle, sheep, pigs, and chickens, in three years from the time it was set out, speaks well for the deep soil of the Prairies. If it would do that in five years in Pennsylvania we should be satisfied.

As remarked lately by one of our correspondents, Fencing is a very heavy item, and tax upon our farmers, and from what we have seen of the Osage Orange here, we are inclined to favor its being planted. It

grows rapidly and strongly, has sharp thorns to the ground, and is very hardy. We have seen the tips or extremities, of late growth, for two or three inches, killed by the winter, but this does not occur with the old and hard wood. The hedge must, of course, be kept trimmed down, so as to become stiff. One of our friends tells us of having lately seen a heifer with her head partly through an Osage Orange hedge, and so fast that she could not move it either way, and by her bellowing and antics, resting on her forefeet, with her hind ones up in the air, and the commotion with the stock around her, he concluded one experiment would be satisfactory.

We have seen a few good osage orange hedges in this State and Ohio; and we append an extract from a private letter written by our excellent friend S. Francis, of the Illinois Journal. He says:—"Our agricultural committee have made examinations of osage orange hedges in this county; and we found some that had been set out only three years, and then turned out—making an efficient fence against horses, cattle, sheep, hogs, pigs, and even chickens. We can now say "Eureka!" We have found it.—The osage orange, in our county, has been proved to make a good and effectual hedge fence. I would strongly recommend, however, that it be cut back, far more severely than usually, in order to give it a thick bottom; for on that its main excellence depends.

We find, also, that the prejudices of our farmers, against this species of fence, are fast giving way, and the numbers of those who plant hedges, constantly and rapidly increasing. One gentleman told me he had sold plants enough, the past season, to make a hedge from this city to Philadelphia. * * * *

What a beautiful sight will the rich prairies of Illinois present, when covered with farms enclosed by the osage orange! and this soon to be done, in central Illinois.

I have often had occasion to say, with you, that by helping to introduce this plant, Professor Turner has done more good in his day and generation, than if he had expended a long life in pounding Greek and Latin into the brains of that class, who prefer ancient lore to living and useful knowledge."

One word more. There is a point which TIME, alone, can fully settle—Will this hedge last?—Will the plant, when old, bear the constant mutilation necessary to keep the hedge in shape? Analogy and its native habits are in our favor. Though a tall tree, on the rich river bottoms, the Maclura is, like the native Crab, a round-headed, long-lived DWARF, along the dry prairie borders, and in the thin upland soils of its native region. What soil and sun effect there, art can more perfectly accomplish here.

J. A. K.

INFALLIBLE REMEDY FOR BOTS IN HORSES.—A correspondent of the "Albany Cultivator" some years since, gave the following receipt, as an effectual and immediate remedy for bots in horses.

Half pint of Vinegar,
Do., do., Gin,
Do., do., Soft Soap,
Do., do., Molasses,

well shaken together and poured down while foaming.

Education of Farmers.

TO THE EDITORS OF THE FARM JOURNAL.—It is a curious inquiry why the knowledge of agriculture progresses so slowly; and why it has yet attained so little in this Country. It is a fact which we are all willing to concede, that our productions are little more than one half of what they should be, and far less than what they are elsewhere; and yet we seem to be content to bide our time, and be satisfied with results, when accident or chance shall produce them, or when we shall be jostled from the "old way" by the coming generation.

More than seven hundred years before the Christian era, Isaiah prophetically speaks of a threshing machine, "Behold, I will make thee a new sharp threshing instrument having teeth." And yet this intimation pointing out almost the very structure of the machine now in so common use, was not realized until the nineteenth century; and then received with a doubting caution that well nigh dampened the experiment. The merchant has carried his enterprize into every nook and corner of the known—and I had almost written unknown world;—the learned have exerted their talents to the developement and practical application of scientific principles, which has given to their class an enviable place in the estimation of mankind:—the mechanic, availing himself of these developements of science, has given them form and shape to an extent which entitles them to the admiration of the world; whilst the farmer stands to gaze with mingled feelings of doubt and astonishment, that all the other pursuits of life whirl so rapidly past him.

What is the remedy for this admitted evil? We answer—the education of farmer's sons through the medium of an agricultural school. We mean a school to educate boys in the art and science of farming; and unless the farmers of our State will zealously embrace this idea, and avail themselves of it, there is no hope that their condition can be otherwise improved, but by the lapse of time, and happening of accidental circumstances.

There is no one of the colleges of this Country adapted to instruct a farmer; on the contrary their system is calculated to educate young men to a state of entire unfitness for any such occupation. A boy, graduated at one of our literary institutions, has already spent that part of his life which alone can be profitably employed to learn the art of farming; and science without art, is still worse than art without science. There is peculiar reason why farmers should take up this subject and make it their own. It is a fact with regard to the system upon which literary institutions are at present based, that their pecuniary resources are never adequate to their necessities, however economical they may be. The consequence of this is that education is made to cost more than they, who rely upon the products of a farm, are able

to pay. Besides, if this expense should have been undergone the farmer has in all probability driven his son from all taste or desire to pursue the calling for which his maturer judgment intended him. And if the boy should return to the farm, it is to exhibit to his disappointed father and brothers how little he knows of the business of his future life.

In an Agricultural School the pupils are laborers on the farm as well as in their study;—their bodies are educated to the art, and their minds to the science of farming;—whilst their hands are employed in the work of the farm, their minds are employed in the pursuit of the knowledge of the reasons for what they do—there is thereby an intermingling of theoretical science and practical art, which is but to be continued through their whole future lives. The Institution thus becomes, in a measure, self-sustaining; and the price of education may be reduced to a mere trifle.

The subject is now before our Legislature in a Bill which provides for the charter of such an institution as we propose. If it should become a law, we desire to call public attention to it, as the best measure which the age has proposed; if it should not, let the farmers of the State look to it that it does not fail again.

FREDK. WATTS.

Carlisle, April 10, 1853.

For the Farm Journal.

"Theory of the action of Lime on Agriculture."

Such has been the title of several communications we have read in this Journal, from the pen of Mr. G. Blight Browne, in one or two of which he presents to the public rather novel views upon this subject; and ideas which certainly seem somewhat discordant with generally received opinions. The latter would be no fault, rather an excellence, were his doctrines only supported by some better analogy, or at least, by arguments a little more convincing, and bearing a little stronger upon the point in question. We wish particularly to call the attention of the readers of this Journal to an article in the March No., in which Mr. Browne denies that the mellowing of a soil by lime, can be in the least degree attributed to the action of this agent upon the mineral matter of the earth, confining this result wholly to the liberation of carbonic acid from the organic matter.

Mr. Browne sustains his views almost entirely upon the following argument: That the comparatively small amount of lime is so widely diffused throughout the soil, that its action upon the mineral matter could not possibly be perceptible. Now if Mr. Browne is a chemist, (as we suppose he is from the fact that he advances original theories on obscure chemical subjects,) he will certainly recollect the fact that a peculiar characteristic of that class of compounds

called silicates, is, that a large quantity of a previously found silicate possesses the property of combining with an almost indefinitely small quantity of a new base, (such as lime,) forming a double salt, whose solubility depends entirely upon the proportion of the silicic acid to the new base.

Thus a very large portion of mineral matter may be seriously changed in its chemical nature by a comparatively minute quantity of lime, and the rearrangement of the atom produced by this transfer of elements, is the true cause of the apparent mechanical effects produced.

Quoting now in Mr. Browne's own language his theory, by which he accounts for these changes, which is as follows:

"We have seen that in the course of decay of the vegetable matter found in the soil, vegetable acids are formed, which have more affinity for lime than carbonic acid has. When the carbonate of lime yields its carbonic acid in favor of one or the other of these acids, carbonic acid is set free in the gaseous state. This carbonic acid occupies a much larger space in the gaseous state, than it did when combined with lime, and by its expansion has a tendency to rend assunder the earth in which this phenomena takes place. In other words it lightens it in the same way that it lightens a loaf of bread. I believe that in this way only is the soil mellowed by lime, and that, in no instance does it render it more compact." We would say that of all the untenable theories that have from time to time been advanced upon this subject, this is certainly the most visionary. Granting that there might be enough carbonic acid extricated from the soil (which is certainly a startling improbability) to lighten the earth "as a loaf of bread," does Mr. Browne suppose that it could possibly be detained long in a medium so porous as the soil. And since the oxygen of the air must pass down through the earth to oxydize the carbon, is it not probable that the carbonic acid may egress just as freely. Another point we may advert to also; Mr. Browne of course recollects that carbonic acid is very soluble in water. Now supposing the earth should be "lightened" by minute bubbles of carbonic acid, does he not know that the first rain would dissolve this almost entirely. Allowing this soil now a few days to dry, on ploughing it up he will find it just as mellow as it was before. Has a new volume of carbonic acid been extricated already? If so, pray how long is the 17 per cent. of organic matter in a fertile soil to last? No, Mr. Browne has certainly been rather too hasty in the publication of his theory. The man who vauntingly says of one writer—"the idea suggests itself to my mind that he was only following in the footsteps of some illustrious predecessor who wrote it down because he thought it should be;" and of another, "The theory, however, as there laid down, is so incomplete in

its details, as not to furnish to the reader sufficient ground either to adopt or repudiate it," cannot be too guarded when he advances dogmas of his own creating, lest he fall into the same error he attempts to correct in others.

J. H. B.

Thornbury, Chester co., Pa.

April 16th, 1853.

The Strawberry Question.

FLUSHING, April 11th, 1853.

TO THE EDITORS OF THE FARM JOURNAL:—I have just perused in your April number, an article signed "Thomas Meehan," which it appears had been addressed to the Pennsylvania Horticultural Society. The public have become wearied with talk concerning the Strawberry, based in error, and calculated only to mislead. Mr. M. states that some plants of Hovey's Seedling, which is a pistillate, "became staminate by being forced slowly in a moderate temperature," but he does not tell us that such plants produced fruit; and if they did so, *whether it was produced without the possible connection of some other variety naturally staminate*. It is well known that Hovey's Seedling and many other pistillates have abortive stamens, which can be more fully developed by position and special culture; but this creates no surprise, when even man himself is abortively mammiform. The real question to be solved is this: Does the Pistillate Strawberry plant, which by itself is barren, change its sexuality by the culture referred to, and produce fruit? Is there any man bold enough to make such an assertion, and if so, let him furnish us with conclusive proof. *I declare it to be utterly impossible*, and that if ten acres were covered with forcing houses, and all were filled with plants of Hovey's Seedling, there would never be one perfect berry produced to the end of time. I base this assertion, first, on the immutable law of nature, whose eternal impress is stamped on every object of creation, and especially on the sexuality of animals and plants, and *from which there never has been, and never can be any deviation*; and secondly, on my own long experience, and that of every truly scientific co-laborer. The statement, therefore, in the article referred to, so far as asserting "the distinction between Pistillates and Staminate to be worthless; cultivation producing either the one or the other," is not only utterly erroneous, but is calculated to excite ridicule in every scientific mind, and is to be classed with the silly prejudices about planting pumpkin seeds at the increase of the moon, and the puerile notions about sixteen year locusts.

The characters of the three natural varieties of the Strawberry, Staminate, Hermaphrodite, and Pistillate, are permanent, and therefore no change can possible take place. I shall discuss this subject fully in the Horticulturist, the commencement of which will be found in the April number.

If it were possible that the transposition of sexes in the strawberry could be accomplished in the manner referred to, it would equally apply to all other plants, and to all animals; and it would be no longer necessary to possess but one sex of horses, cattle, or fowls. For, be it remembered, the same eternal and immutable law apply to the humblest plant, and to the minutest insect, that applies to the mightiest trees and animals of our globe.

Yours very respectfully,

WM. R. PRINCE.

For the Farm Journal.

Analysis of Soils and Professor Mapes.

MESSRS. EDITORS:—

I have ever considered it a misuse of the pages of a journal to occupy its space with personal contentions, and do not intend to be diverted from the task I have undertaken, by false issues, or personal attacks. Any arguments that can be adduced to bear on the subjects under discussion, I am willing to notice; but it would be but waste of your time to read a journal made up of discussions of the former character. Any gentleman desiring to communicate with me on such subjects, can save the agricultural reader much misspent time, by addressing me through the post office.

In an essay lately published in this journal, I incidentally mentioned a subject which it seems has given offence to Professor Mapes. The subject merely so touched upon, is one which merits more attention than a passing notice.

It is a matter of much interest to the farming community, to know whether any practical good can result from the possession of an analysis of a sample of soil taken from the farm; and whether any consulting Agriculturalist, from an inspection of such analysis, is enabled to write letters of advice calculated to bring great returns to the farmer. If such stupendous benefits as are contended for by some gentlemen, can accrue; then advantages like these should no longer be neglected by the readers of the Farm Journal, if otherwise, they should not expend their hard earnings in such fancy trimmings.

A proposition is now, or has lately been before our Legislature, to appoint a State Agricultural Chemist, and the propriety or impropriety of such appointment is a matter of great moment to the farmers of this State. I for one give my voice for the appointment of such officer by the State. I will give you my reasons for so doing. I am of the opinion that it can be of no practical use, for each farmer to know the exact quantitative analysis of his soil; but I believe that great public benefit will ensue from the well-conducted labors of a competent person paid by the State. The duty of such officer would be to examine the several varieties of soil found in the State, and in a publication of these examinations, lay down the

general treatment each variety should receive, according to the best information in his power to obtain.

I am fully persuaded that the plan adopted by private enterprise, is a great burthen to the community of farmers, and that they reap no adequate return.

Let us see how the matter is done in New Jersey? We are told by Professor Mapes, (March 1853, p. 1) "The whole receipts of the Working Farmer will be expended upon it. Any advantage we may derive by its circulation, is but incidental to our pursuit of a consulting agriculturalist."

(April 1853, p. 1) The same gentleman tells us that he employs under him, Dr. Charles Enderlin, Dr. Antizell, Dr. James Chilton, and others; that Dr. Antizell has analyzed sixty soils for him in the last two months, and that some of those gentlemen have one hundred going on at a time.

This is a grievous and unnecessary expense, for the obvious reason that there is no use in more than one analysis of any vein of soil running through any section of country. No man who presents his sample of soil to be analyzed, can say that it represents the average of his own land, any better than it does that of his neighbor living on the same vein of soil. If this were not the case it would be singular, indeed, for the sample was, no doubt, not taken from all over his own farm, but from a selected spot. I hear some one say—but he may have manured more or less than his neighbor. This appears, at first sight, formidable indeed; but vanishes on examination. Constant cropping for many years by the one, without any manure, and new land might differ some, even perceptibly; but the difference in the farming of two neighbors would not be appreciated in analysis.

In order to lead to a better understanding of this matter, let us transcribe three of these analysis from the pages of Prof. Mapes' Journal. (March 1852, page 2.)

Moisture	-	-	-	-	-	4.
Vegetable matter	-	-	-	-	-	2.
Quartz Sand	-	-	-	-	-	88.25
Alumina	-	-	-	-	-	4.16
Per-oxide of Iron	-	-	-	-	-	.44
Lime	.	.	.	.	.	.80
Magnesia	.	.	.	.	.	.10
Potash	.	.	.	.	.	.02
Soda	.	.	.	.	.	.03
Chlorine	.	.	.	.	.	trace
Sulphuric Acid	.	.	.	.	.	.18
Phosphoric Acid	.	.	.	.	.	fanit trace
Carbonic Acid	.	.	.	.	.	" "
Loss	.	.	.	.	.	.02
						100.00

This was made for a correspondent at Wareham, Massachusetts, by Dr. Antizell.

April 1852, page 25.

	No. 1	No. 2
Organic Matter - - -	.60	10.
Silica - - -	87.12	
Alumina - - -	8.35	
Iron and Magnesia - -	2.10	
Lime - - -	.45	3.
Magnesia - - -	trace	
Sulphuric Acid - - -	.25	2.
Phosphoric Acid - - -	.05	5.
Chlorine - - -	-	2.
Potash } - - -	-	3.
Soda } - - -	.07	4.
Carbonic Acid - - -	.81	

This Analysis was made for—Warren, Somerset
co., N. J., by W. H. Bradley.

May, 1852, page 49.

	No. 1	No. 2
Silica - - -	86.31	
Alumina - - -	9.15	
Lime - - -	2.20	3.
Magnesia - - -		
Oxide of Iron - - -	1.54	
Oxide of Magnesia - -	trace	
Potash } estimated together - -		.20
Soda } - - -	.14	.30
Chlorine - - -	.14	.10
Sulphuric Acid - - -	trace	.20
Phosphoric Acid - - -	-	.40
Organic Matter - - -	.35	5.
Water Loss &c. - - -	.21	
Carbonic Acid - - -	-	2.

The reader will observe in the two last tables, a second column marked No. 2; Speaking of this the learned Professor says—"The necessary amendments are made under No. 2.

The possession of a paper like either of the three above tables, would not signify much in the hands of the ordinary farmer; but in it he has his five dollars worth. That is the price charged for the document, and if really and fairly made, has cost \$25 worth of labor. But what use can the farmer make of it? He does not understand sufficiently these elements and their functions to be guided by such a table.

We have it! Does it not put you in mind of something you have heard before. "Walk in gentlemen, only a sixpence." But when you are fairly in, you discover that the charge for going out, is more than for going in. Well, as the farmer cannot understand this, he must have a letter from Professor Mapes to explain it. (April 1853, p. 1) "We agree with Mr. Browne, that \$5 is too small a sum for the analysis of a soil; and for that reason we employ those who choose to work at that price, and use *our* time in writing the accompanying letters of advice for which we charge \$25 each."

But of what use or supposed use is this table of constituents? By the first column we know how much of each constituent is already in the soil; and

by the latter, or No. 2, we are informed how much is needed to make our soil fertile without putting on any more; or in other words, a perfect soil. Anywhere between none at all of a constituent, and the number or proportion in the 2d column; and we must go on adding, at least so says the learned Professor. (April 1853, page 1.) "You need not attempt to add 'the whole required quantity to your soil in one, two 'or three years, but by continuing, the use of the 'amendments recommended, with reference to the 'relative proportions only, you will obtain full crops 'and eventually place your soil in a condition, to be 'worked with very slight quantities of farm or other 'manures."

Accompanying each of these tables is to be found the letter of advice as sent by the learned Professor, and based upon the several tables.

By a perusal of these three letters, the reader will find that substantially the same amendments are prescribed in all three cases, yet other than their being about the same as regards Sand and Alumina, they differ as much as could be expected,

The first soil contains of vegetable matter, 43560 lbs.

The second " " " " 13068 lbs.

The third " " " " 7623 lbs.

The first soil contains of lime, 17424 lbs.

The second " " " " 9801 lbs.

The third " " " " 47916 lbs.

The first contains of Phos. Acid, faint trace.

The second " " " " none at all

The third " " " " 1089 lbs.

He recommends for all of them:

Muck,

Potash, or ashes,

Bones dissolved in sul. acid,

Salt and lime mixture,

Night soil, or its equivalent,

Peruvian guano,

Charcoal dust.

Will any body tell me, what else could be recommended?

Each letter abounds in advice about other little matters, to be found in any agricultural book.

It is a familiar fact to you all that one bushel per acre of Plaster will manifest its improvement, so as to be observed by any one. The dose of Peruvian Guano is only about 300 lbs. to the acre. Dissolved bones are rarely applied in larger quantities than three bushels to the acre.

We are told by Professor Mapes that 100 lbs. of his improved super Phosphate of lime will increase the crop one-third.

If we calculate the weight of an acre of soil to the depth of nine inches, we will find that it is 2178000 lbs.

One hundred of the learned Professors' fertilizer contains 19 lb. of Phosphoric acid. If 19 lbs. of Phos. acid can do so much good, when spread over such a

large surface, there must be some reason for it, because soils that contain much larger quantities of this material are benefited by it.

The learned Professor recommends dissolved bones in all three of the above cases, yet the one soil has none of this material in it; the one has a faint trace, and the other has 1-2000 or one pound for every two thousand of soil, and when calculated will be found to amount to 1089 lbs., which would cost \$145 27 cts., provided resort were had to the learned Professor's improved super phosphate of lime to supply it. If this be correct what use then to know the exact amount in the soil? Why not use the fertilizer without knowing?

As to the lime no one can help seeing the great disparity. The third specimen has more than one pound of lime for every square foot of ground, yet the learned Professor although he says, that it does not need lime as much as it does other amendments, yet he prescribes *lime*, when he comes to tell this individual the amendments he should put on his soil.

Nothing can be more evident than that the quantity that already exists in the soils, generally to be found in Pennsylvania and New Jersey, has no weight in the choice or application of amendments.

There is one matter that may have struck the attention of the reader, and that is, how it could be possible for a soil to contain 2.20 of lime and not the slightest trace of carbonic acid.

Mr. Bradley may have been a very able chemist, but to avoid suspicion of error, he should have explained the state of combination in which he found this lime. It could not have been caustic lime, because as caustic lime it could not exist in the soil for any considerable length of time, before it would take carbonic acid from the air. Too little is yet known of agricultural chemistry, for any man to be guided entirely by an analysis of the soil. Too little is known of the laws of agricultural chemistry for any man to be able to say why 19 lbs. of Phosphoric acid added to a soil which already contains 1089 lbs. can be so beneficial.

(Albany Cultivator, April, 1853, p. 114.) "Farmers have been told that analysis would show the exact composition of their soils, and its wants; that if any ingredient should be deficient, the chemist could point out with accuracy of mathematics, the substance and the quantity that would restore its fertility, without resorting to the random and empirical course of applying a whole set of fertilizers in the shape of common manure. Experiments of this sort have been abundantly tried, a few have succeeded, and these have been widely published; most of them have failed, and the failures have slowly found their way among the intelligent portion of the farming community."

If the second column means nothing, it should not be added to the table; if it means any thing, it must

be, that the farmer is expected to bring his ground crop to that point at some time. Professor Mapes tells us he does not expect this to be done in one, two, or three years. But let us see if it can ever be done.

By reference to the 2d column of the 2d and 3d tables, both of which were compiled by Mr. W. H. Bradley, a gentleman (so says Professor Mapes) of an uncommon ability, a student and *cleve* of the learned gentleman.

As to item of organic matter. The table No. 2 requires that this ingredient be brought to 10-100. No. 3 only requires that it should be brought to 5-100.

Why this wide difference, amounting to tons of manure, should be established, between these two soils, which are exactly alike as to silex and alumina, I cannot tell. But you have it so laid down. The first of these two would have to apply one hundred tons of dry manure to the acre.

As to the item of Potash. No. 2 is required to add potash until it contains 3-100. No. 3 is only required to bring his land up to 1-500, or the 20-100 of 1-000.

As Potash is a very costly article, this is a serious difference. No. 2 would require 63340 lbs. of Potash, and No. 3 would only require 4356 lbs. If we estimate the ordinary Potash of commerce at five cents per lb., and 100 lbs. of commercial Potash to yield about 60 lbs. of real Potash, the Potash would cost 8½ cents per lbs. The real Potash for No. 2 would cost \$5445 00. That for No. 3 would cost \$363 00.

No. 2 is required to bring his land up to 5-100 of Phosphoric acid. He would have 107811 lbs. of the acid to furnish, and calculated by the price of the improved super Phosphate of lime, he would have to outlay \$13476 37½ cts.

No. 3 would have to outlay for 8712 lbs. \$1089.

Let any one look at the above, and say whether it is within the bounds of reason for any one to expect to be able to bring his land up to this mark, or any way near to it. Is it not ridiculous to set down figures in this manner, which either mean nothing, or mean folly?

I cannot help thinking that such wide discrepancies between these tables are very extraordinary, and that they were both set down by Mr. W. H. Bradley, and endorsed by Mr. Mapes, that neither of these gentlemen, in their zeal for the mineral theory, have ever stopped to count the cost, but have set the tables down at random, and have no fixed ideas on the subject.

I hope the wisdom of our Legislature will point out to that body the propriety of taking the matter into their own hands, and out of that of gentlemen interested in the sale of fertilizers.

G. BLIGHT BROWNE.

Gwynedd.

For the Farm Journal.

Polishing Plows.

The application of Sulphuric acid, diluted with its own weight of water, to the mould-board of a plow, and allowing it to remain on the iron twenty-four hours, would be calculated to eat the surface into holes, and destroy the iron. Dilute Sulphuric acid will not only dissolve the oxides of iron; but will destroy the metal.

If those who wish to spare themselves the trouble of polishing a rusty mould-board, will have recourse to muriatic acid, (quite as cheap an article,) they will find that this acid will not touch the iron, but will render the rust soluble and easily removed. I would not advise allowing the surface to remain moist with any acid twenty-four hours. Muriatic acid will do the work in five minutes—and should be either washed off, or cleansed by running through the soil without delay.

G. B. B.,
Gwynedd.

Rape Seed.

PROSPECT FARM, April 6, 1853.

J. L. DARLINGTON:

"Dear Sir—Finding that rape, or rape seed, is by some considered a profitable crop, I would like to know more about it than I do. Indeed I know nothing about it. Will you please to publish in the Farm Journal how it is raised, when and how the seed is sown, how the crop is cultivated, when and how the seed is gathered, and how oil is manufactured from it. Also, what kind of soil is most suitable for it.

Will it do to plant strawberry plants any time during summer?"

We have but very little knowledge of this crop, in the United States, and do not at present know of any place where it is cultivated. In England it is grown extensively, chiefly for the oil, expressed from the seeds, and is considered very profitable, although rather exhausting to the land. It belongs to the Brassica family, and likes a deep, rich and dry soil, although often grown on reclaimed marshes, as a first crop. In England the season for sowing, is the same as the common turnip, either broad cast or in rows, and is transplanted the latter part of summer, in rows a foot apart, and six inches in the row, or if the land is rich, one foot to eighteen inches apart, is thought to ensure a better crop of seed, than when closer.

It is also sometimes sown broad cast, and pastured off in the fall and winter with sheep. The roots remaining over winter in the ground, go to seed the following season, but the yield is not equal to where they are transplanted.

Making allowance for the difference of climate, rape, for seed, probably should be managed here as cabbage or turnips.

Great care is necessary in harvesting the seed, to prevent its being shaken off, or exposed to high winds, and it requires to be threshed out as soon as reaped.

The produce amounts to 40 or 50 bushels to the acre. The green leaves and dry haulm are considered excellent for stock, and the rape cake left, after the seeds are expressed, are often used as a top dressing for different crops.

In regard to strawberries, they may be transplanted at any time of summer, advantage being taken of a damp spell of weather. If put out in July, August or September, after the young runners have acquired strength, and become well established, (and none others should be planted,) they will become rooted before winter, and, if slightly protected from being heaved out by frosts, will bear a fair crop the following season.

Premium List of New York State Agricultural Society.

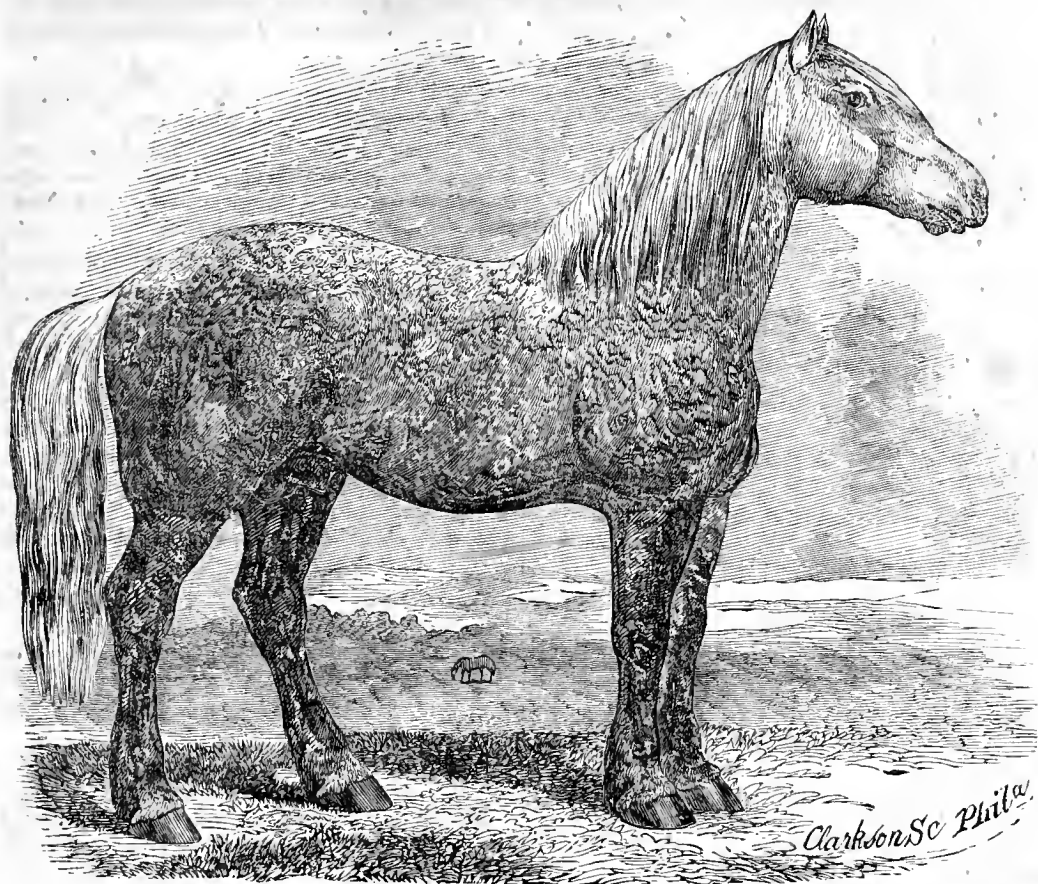
We have received, just as our paper is going to press, a Journal *extra*, of the New York Agricultural Society, containing list of Premiums for present year. The exhibition is to be held at Saratoga, on the 20th, 21st, 22d and 23d of September. The range of articles for competition is very wide, embracing stock of all kinds, and their produce in butter and cheese; wool and silk, domestic and other manufactures, needle, shell and wax work, flowers and fruit. These latter present quite a large list. There are also premiums for paintings, animal paintings and drawings; stores and silver ware, cutlery; management of farms; experiments in draining; experiments in the preparation of Flax, as a substitute for wool and cotton, \$100 premium; experiments in the cultivation of Potatoes, \$125 premium.

There are also premiums for hay presses, a large list of farm implements, hydraulic rams, best improved tiles, hay and cattle weighing scales, \$20; best plow, \$25; best lot of butter, made by girls under twenty-one years of age, silver cup; second best, pair butter knives; third best, set tea spoons; fourth, silver medal.

Altogether, the premium list is one of the most liberal character, and highly creditable to the enterprise, and public spirit of the Empire State. We hope our own State Society will soon be able to offer similar inducements to competitors. The Keystone must not be behind hand in any thing.

Remunerative premiums, paying for at least all expenses and trouble, with a reward to superior skill and diligence, and operating as real inducements, are the great causes of the success at the State fairs in New York and Ohio.

RICH MEN may cast large offerings into the treasury without the slightest personal inconvenience or self-denial; but when the poor widow casts in her two mites, which is all her living, we are sure that so exemplary an act of self-denial results from a profound sense of her obligation to God.



Norman Horse—Duke of Normandy.

Imported from Havre, by Mr. Samuel Holman, of Chester County, Pa., in the Summer of 1851.

We believe this is the second importation of Norman Horses into the United States,—Diligence, imported by Edward Harris, Esq., of Moorestown, New Jersey, being the first, from whom the Norman stock in several of the States are descended.

The "Duke of Normandy" was selected in France, by Mr. Holman himself, having gone expressly for that purpose, and as will be seen by the annexed certificates, he has succeeded in procuring a very superior animal, whose purity of blood, and character are unexceptionable.

The importation will be a valuable one to the farming community, affording an opportunity to combine just the requisites wanted in the horse of all work, of the American farmers, great strength, endurance and hardiness with quick draught. The Norman stock of horses have been kept distinct for ages, and are traced back as far as William the conqueror. They are the origin of what is known here as the French Canadian; show a great development of muscular power, and it is generally conceded that no stock of horses, of the same weight, either in Europe or America, can perform the same heavy, fast labor.

"They have derived the name of Diligences, from the fact that they are almost exclusively driven to their coaches, or wagons, as they would be called here, weighing thirty to forty hundred pounds, without passengers, and making with them a speed of ten to twelve miles an hour." The color of the Norman horse is generally gray, varying somewhat in shade; height from fourteen and a half to sixteen hands high; weight thirteen to sixteen hundred pounds.

The Duke of Normandy is now four and half years old, fifteen hands three inches high, will grow to sixteen. His weight is fifteen hundred pounds.

Mr. Harris who passed through France in 1851, speaks of "the fine condition in which these horses are always kept, in spite of hard driving, and worse grooming, the great age they sometimes attain, and the rarity of spavins, wind-galls, or other blemishes of the limbs."

The address of Mr. Holman, is Chester Springs, Chester county, Pa.

CERTIFICATES:

I do hereby certify that the two Diligence Colts, sold to Mr. Samuel Holman of the United States of America, were bred and raised by me, that they are from my best brood Mares. The stock is pure, and I consider them as fine as any I ever bred, and I doubt whether a better pair of Colts can be found in Normandy.

Given under my hand, at Rowan, in Normandy, July 1st, 1851.
Z. PIMONT.

I do hereby certify that I shipped the two Normandy Diligence Colts; bought by Mr. Samuel Holman, of Z. Pimont, on the 8th of July, A. D. 1851, on board the Packet Ship Scianne, Capt. Williams, consigned to R. H. Hopkins & Co., N. Y. I am well acquainted with Mr. Pimont, and with this stock of Horses, and know that they are thorough Diligence. These horses are held in high estimation here on account of their uncommon bone and muscular power, quick action and durability, and I consider the pair sent, a fair specimen of the stock.

Given under my hand, at Havre, in France, July 10th, 1851.
Y. BARBE.

We do certify that the gray horses, consigned by Mr. Samuel Holman; to us, were received from on board the Packet Ship Scianne, Capt. Williams, on the 12th day of August, A. D. 1851, in good condition, and delivered them according to his orders, one to his brother, Mr. F. Holman, and the other to Dr. M. Brown, of Ohio.

Given under our hands at New York, Aug. 15th, 1851.
R. H. HOPKINS & CO.

Corn Planting.

A friend has kindly sent us a manuscript of Proceedings of a recent meeting of the "Philadelphia Society for promoting Agriculture," which we are pleased to be able to bring before the readers of the Farm Journal.

Philadelphia Society for promoting Agriculture. Meeting April 6, 1853.

Debate on Corn Planting. Subject proposed by Dr. Gouverneur Emerson.

DR. EMERSON wishes to learn the opinion of members, and their experience as to the comparative advantages of planting corn in hills, or by the drill. He preferred the latter. His drills were at four feet distance, and the corn was dropped one grain for every foot. This, however, he thought too close—especially if a drought occur in the latter part of the season. He thought five feet distance, and one foot apart, the best for average seasons. This had produced excellent crops. With him the chief objection to drilling corn arose from the drought, but even in foul ground better crops had been yielded by such planting, than in hills at equal distances, in the usual way. He dropped but one grain in each hill, and re-planted if necessary.

MR. JAMES GOWEN had planted in drills. The plan had been tried in the South, and objected to on account of the corn *firing*, as it was termed, that is becoming scorched in appearance from the tall luxuriant corn, not having free air and space for its development. He always drilled in clean land, well prepared, and harrowed in sun-shine, between 10 A. M. and 3 P. M. Then he drills with confidence, at three feet distant, and one foot apart—has succeeded perfectly. His only objection was the great destruction caused by high winds in the months of August and September. The corn in drills presents a broad and almost continuous sheet to the winds, and having less root support was more prostrated.

PRESIDENT (Dr. Elwyn.) Has Mr. Gowen no trouble from weeds?

MR. GOWEN—None whatever. If the ground be well prepared, one or two hoe-harrowings in a year, are abundant to keep it clean both from weeds and grass. I am satisfied that one of my crops averaged more than one hundred bushels shelled corn to the acre, prior to the occurrence of an autumnal storm.

MR. C. W. HARRISON said that the proper distance for planting should be determined by the quality of the soil, the quantity and kind of manure, and the amount of labor. To those who were favored on these three points, drill planting might be preferable. But considerations of economy and profit attached him to the old fashioned hills—say four feet by four feet, four grains planted, and three stalks cultivated to the hill. Thus treated, his crops had averaged seventy-three bushels and one peck to the acre. A great indication was to stir the ground, and keep down the weeds. This, with the drill, had been found difficult, without a resort to hand labor, and in many places drilling had been abandoned.

MR. A. S. ROBERTS thought that the first thing to be done, was to make the ground rich. Corn could not be over manured. The general error was to put in too little manure.

DR. EMERSON had forgotten to state, that during the summer before last, a very dry one, as members would recollect, he had a field of drilled corn, which he had, on account of the drought, almost given up as ruined, yet eventually it proved to be but slightly injured.

MR. HARRISON—Had Dr. Emerson any in hills for comparison?

DR. EMERSON—I had, and I never, other things being the same, saw corn in hills equal to that which had been drilled.

PRESIDENT—Has Dr. Emerson ever heard of one hundred and sixty bushels per acre?

DR. EMERSON—No sir, and certainly I never saw it *measured*!

DR. MCCREA had produced a fine crop in hills, four feet by three feet and a half, without manure. He had simply turned under the sod, no stalk was less than eleven feet high.

PRESIDENT—How old was the sod?

DR. MCCREA—Untouched since 1828. I think that poudrette and planting in drills would have improved my crop.

MR. J. G. FISHER wished to inquire what quantity of poudrette was thought the best.

DR. MCCREA—With a quart to the hill, the yield has been enormous.

MR. ISAAC W. ROBERTS—My crops have averaged for twenty years, ninety bushels to the acre. I have used poudrette ever since I have been able to get it. I plant in hills four feet by four feet—four grains and a handful of poudrette to each hill.

Mr. ISAAC NEWTON thought four feet ten inches, by four feet ten inches, afforded a better yield than four feet by four feet. He used a compost of pig manure and fence and head-land scrapings, and he had it hauled out in February. When he wanted it well turned over, he sprinkled a few grains of corn before heaping. The pigs would be sure to find them and he knew no better shovel for the purpose than a pig's nose. A shovel full of manure to each hill, added about fifteen or twenty bushels per acre to the crop. He does not use the cultivator because he is satisfied that running it between the rows after the corn is three feet high, lacerates the fibres, which even thus early are sent out from below and above the ground's surface. In dry weather, and when the corn is tasselling he runs the plough so as to throw the earth toward the hills and over the roots. If sufficient of the compost is not at hand, he obtains charcoal dust from refineries, mixing one bushel of it with two bushels of plaster, and a bushel of hen manure.

Mr. GOWEN maintained that bad handling of the cultivator was alone the cause of injury to the radicles. In proper hands the hoe-harrow was unequalled for the purpose. Nor need it be run so close, or so deep as to risk injury. To prefer the plough to the cultivator he thought extraordinary. The latter could be regulated to any depth greater than one inch. It was impossible to plough as shallow as our corn hoe. Correct principles taught that the plough lacerates worse than was possible with the cultivator.

Mr. NEWTON explained more particularly how he would handle his plough so as to avoid the difficulty apprehended by Mr. Gowen.

Mr. A. S. ROBERTS had always ploughed in olden times, but things had changed. Now Major Reybold, of Delaware—good authority—in his contracts with those he employed, always specified that no plough should be used among his corn.

Mr. S. G. FISHER inquired if any present had produced on poor land, one hundred and ten bushels to the acre by means of Guano? That had been done by Mr. Cassidy, of our city, the celebrated peach grower. Mr. C. has raised seventy acres of corn, averaging eighty bushels per acre. Ten of these, on which 150 lbs. Guano per acre had been thrown broadcast, and ploughed in, yielded 110 bushels of shelled corn each. The height of the corn was also extraordinary, it averaging eighteen feet. Mr. Fisher had tried the plough in the corn field; so had his neighbors, and all had abandoned its use, and adopted the cultivator. He agreed fully with Mr. Gowen on this subject. There were reasons for this preference, based on the laws of the vegetable economy. 1st. The long roots, extending several feet, laterally were cut by the plough, and the growth of the plant checked. 2d. All roots require a certain distance

below the level of the ground. If this be increased or diminished, the plant is injured. The plough in throwing its ridge over the roots, buries them deeper than before, and they suffer in consequence. 3. After they have become habituated to this state, they are again uncovered by a second ploughing. Each time the plant, in accommodating itself to the new condition, was checked. Corn requires but superficial cultivation, and two inches were sufficient to kill the weeds.

Dr. EMERSON regarded the corn crop as the basis of our cultivation. He had heard much of Dickey's corn drill, and wished to know if any member present had used it. The inventor had never raised less than 100 to 113 bushels to the acre.

Mr. GOWEN suggested that the kind of drill was of secondary importance to the management of the crops.

Discussion closed.

K.

Guenon's System. High prices of Cows.

At a recent sale of dairy cows, twenty-two in number, belonging to Henry D. Court, near West Chester, six averaged over \$50 per head; six over \$40, and the remainder, many of them not being fresh till next fall, from \$33 to \$35 per head. They were of what are called common stock, but had been selected from droves chiefly, by Guenon's System, and the result, as in many other cases in this vicinity, proved its entire correctness. They had formed part of a milk dairy, and averaged twenty quarts per day for six months. Guenon's system is one of the most valuable discoveries of the day to the farming community, and when widely known throughout our state, will produce in the aggregate an enormous saving of expense, in rearing and keeping poor milkers, and in time, an equally great increase of dairy products. Since the appearance of our different articles in the Farm Journal on this subject, there has been, and still continues to be applications at the Agricultural Warehouse, in West Chester, from various parts of Pennsylvania, for the pamphlets of Guenon & Nefflin, and so far as has been heard from, the correctness of the system has been fully verified, when closely studied and understood.

Cotswold Sheep.

The following are the weights of six "new Oxfordshire or Cotswold Sheep," bred and fattened by Wm. Reybold, of Delaware, and lately slaughtered in Philadelphia.

	Live wt.	Dead wt.	Age.
No. 1.	362 lbs.	269½ lbs.	4 yrs.
" 2.	295 "	213 "	3 "
" 3.	295 "	203 "	3 "
" 4.	273 "	201 "	3 "
" 5.	259 "	181 "	2 "
" 6.	242 "	160 "	2 "

Flora Cestricea, an Herborizing Companion
For the Young Botanists of Chester County, Pa., by
William Darlington, M. D., LL. D.

A new edition of the above invaluable work, is just issued from the press, and is now on our table. It is arranged according to the natural system, and is one of the most complete compendiums of any local Flora extant. Not only are all the indigenous plants which have yet been discovered in our county enumerated and accurately described, but also those which have become naturalized, and are cultivated for domestic purposes, the first being printed in Roman, the second in Italics, and the last in small capitals, so that the eye of the student may embrace the whole at a glance. There is also a glossary of Botanical Terms, a list of abbreviations, a classified list of the naturalized and cultivated plants, an index of orders, genera and species, with synonyms and an index of English names, together with a synopsis of the Linnean arrangement of the genera treated of, with references to the natural orders to which they severally belong. Every thing appears to have been done, as regards simplicity of elucidation, completeness of classification and description to make the work entirely acceptable to the young Botanical Student, and the Agriculturist, as well as the older and more experienced gleaner in the fields of this delightful science.

The work comprises a description of six hundred and fifteen Genera, and thirteen hundred and ninety-three species of plants of Chester county. Of these, eleven hundred and four are indigenous, one hundred and fifty-seven are naturalized, and a hundred and thirty-two cultivated. Although intended to be entirely complete, only so far as regards Chester county plants, it embraces a large part of the Flora of the middle States, and will be valuable to the general student.

The present edition is also enriched with the addition of five discourses by the author, introductory to a knowledge of the science, and explanatory of the leading features of the Linnean and natural systems. To those who are apt to be confounded with the technical terms and necessary scientific nomenclature of Botany, so far as to be afraid to commence the study, we would especially commend these preliminary discourses. In the usual happy style of the author, he has taken hold of and brought to view, the *strong points*, the *important link*, on which this science hinges, and condensed them in a striking *coup d'œil* the most definite and comprehensive we have seen. They seem to take one into the inner temple, and reduce to a small compass the *apparent* mysteries of the great groundwork often so formidable to beginners. The work is neatly printed, and handsomely got up in octavo form, of about six hundred pages, and accompanied with a map of the county. It may be obtained at the Agricultural Warehouse in this Borough, price \$2 00 We extract the following excellent remarks

from the preliminary discourses in the first part of the work:

A very natural preliminary inquiry, on the part of a Pupil engaging in the study of *Botany*—or, indeed, in any other study—would be respecting the *utility*, or value, of such an attainment; and therefore—in order to encourage the young Beginner—it may be well to hint at some of the inducements to the undertaking. These may be considered in reference to mental discipline, intellectual gratification, and practical usefulness. It is impossible for any one, endowed with the common attributes of humanity, to avoid being something of a *Naturalist*. One of the earliest indications of Intellect, consists in the perception, and discrimination, of the beings and objects subjected to its cognizance. In proportion as the mind is expanded, and its faculties disciplined, so are its powers of discrimination augmented. *Natural Science*—or that knowledge which enables us to ascertain, to distinguish, and to arrange, or classify created beings—is emphatically a *science of observation*; and no study has a happier tendency to induce habits of attention, and accuracy in noticing the characteristic features of objects. No one is less likely to be misled by vulgar prejudices, or to be made the dupe of imposture, than the careful observer, and intelligent student, of Nature. Habitual scrutiny renders him acute in detecting error, and discovering truth,—while it makes him cautious in receiving marvellous statements unsupported by credible testimony.

While his faculties are thus improved by a salutary discipline, his taste is no less gratified by the pleasures of the study:—and, of all the inanimate products of creation, there is none more agreeable to contemplate, than those which constitute the *Vegetable Kingdom*. Destined, by the wisdom of a bountiful Providence, for the sustenance of a higher order of creatures,—they have, at the same time, been admirably adapted to the purpose of adorning the surface of the earth, and charging with fragrance the atmosphere which surrounds it. Occupying an intermediate position, between minerals and animals, they afford us the means of investigating the wonders of organic life, without the infliction of torture, or the necessity of witnessing the sufferings which attend such researches in sensitive beings. Hence, the study of the vegetable creation has ever been a favorite pursuit with gentle minds. There is a calm delight in the contemplation of Plants and Flowers, which is never felt—and can never be appreciated—by those who find their chief gratification in the tumults and commotions of the animal world. The disposition of man derives much of its character from association, and external impressions; and it is, doubtless, partly owing to the bland influences of a rural life, that enlightened agricultural communities are less prone to those cruel excesses, which so often disturb the artificial and struggling society of crowded cities. If such be the tranquilizing tendency of a simple residence among the Vegetable tribes,—how propitious to the growth of the gentler virtues must be the pursuits of the *Botanist*, who may be said—almost without a figure—to hold daily converse with some of the loveliest works of the Creator,—and to regard with something like the pleasure of a friendly recognition, every Plant which he has successfully investigated!*

*No one ever heard a true lover of Botany complain of *tedium vitæ*, or of a want of pleasant employment for his leisure hours. His pursuits, it is true, do not produce that vehement excitement which attends the scrambling rivalry of political aspirants, and is so seductive

We know, indeed, that those grovelling mortals who consider nothing as valuable, but mere tangible wealth, are apt to regard the researches of the Naturalist as useless and frivolous,—just as gross, uncultivated minds suppose all pleasures to consist in sensual gratifications, and have no conception of such a thing as intellectual enjoyment. It is the besetting infirmity of sordid natures, to mistake the *instrument* for the *object*; to limit the aim, and confine the affections, to the *means* of enhancing our character, as rational beings—instead of employing those means for the attainment of a nobler *end*. But, is it true, that the studies of the Naturalist are useless and frivolous? On the contrary, the most bigoted Utilitarian—on a moment's reflection—will be forced to admit, that they are fraught with results of daily, and high *practical* value, in many of the most important pursuits. To the Agriculturist, the Gardener, the Physician, and the Artist, a correct—and even scientific—knowledge of the Vegetable Kingdom is, to a certain extent, indispensable:—for, a *scientific* knowledge of plants merely implies an acquaintance with their true character and properties,—and *that*, every person whose business is with plants, is bound in honesty and good faith—as well as by the requirements of self-interest—to possess. Such knowledge is, of course, to be best obtained by means of the most skillful, systematic, and facile method of investigation; or, in other words, by the help of a truly *scientific arrangement*.

The successful *culture* of Vegetable Products, requires a knowledge of the character and habits of the plants which yield them; and that knowledge—so far as it is possessed and applied—is, neither more nor less than *practical Botany*. He who is acquainted with the greatest number, and best understands how to multiply the most valuable, is at once the best Botanist, and the most accomplished Agriculturist and Gardener.

Is it not desirable, then, that we should extend our knowledge of the useful Plants,—and learn to estimate correctly, their true and relative values? Is it not necessary, also, that we should have a competent knowledge of the pernicious and worthless Plants? But, to accomplish this, is to make a respectable progress in the Science of *Botany*. Hence I contend, that a certain portion of Botanical knowledge is indispensable to the *Farmer* who aspires to excellence in his profession,—and who would aid in elevating that profession to the rank which it is entitled to hold, among human pursuits. It is not necessary that he should prosecute the study in all its extent; for *that* would be the business of a life-time: But he ought to make himself acquainted with the Vegetation of the region, or district, in which he resides,—and he should understand well the character

to the eager fancies of the crafty and ambitious; but the gratifications resulting from their culture—being founded on a consciousness of their value to our fellow creatures, as well as to ourselves—are of the most precious and enduring character,—and are, moreover, wholly independent of vulgar taste or caprice. [See Sir H. DAVY'S *Consolations in Travel*.]

The attractions of Botanical Science are truthfully and appropriately alluded to, in the following extract of a letter from the late Sir JAMES EDWARD SMITH to the Rev. Dr. MUELENBERG, dated London, March 6, 1793:—"You cannot be more enthusiastically fond of Botany than I am; and your letter promises me a fresh instance, in addition to many already experienced, that this study—charming in itself—is still more valuable as a key to the intercourse of the most amiable minds. To Botany I owe friendships and connexions I else could have had no chance of forming; and your letter, overflowing with the milk of human kindness, and with the amiable modesty of real merit, promises me one which it will be my most anxious care and ambition to deserve."

of all those plants which immediately concern him, as an Agriculturist. This is a duty by no means so difficult as is generally supposed: And with the aid now afforded by elementary and systematic writers on the subject, the attainment is rendered as agreeably interesting, to an intelligent mind, as it is profitable in its practical results. The man who does not know the more important plants by which he is surrounded—whose eye has not learnt to discriminate their characters,—is deficient in one of the primary qualifications of an enlightened cultivator of the soil. In truth, it is mortifying to see a good practical Farmer, or Gardener, ignorant of some of the very plants which it most behoves him to know,—wasting his time, and his energies, in mis-directed efforts to protect himself from the Vegetable pests which invade his grounds. Many of our farms are already over-run with worthless weeds, which are extremely difficult to subdue; and we are menaced with the inroads of others still more annoying and pernicious: Yet there are but few of our Agriculturists who are able to identify these invaders, when they make their appearance,—or who seem to be aware of the importance of prompt and vigorous measures for their extirpation.*

WORK FOR THE MONTH.

FARM.—The most profitable crop raised on the Farm, Indian Corn, now requires special attention. We are not favorable to too early planting; the second week in the month, for this section, will answer better than earlier. As a general rule, any crop which starts well, and has a *vigorous, uninterrupted* growth till maturity, results better at last, than if checked, or stunted, and barely kept alive, by unfavorable changes of weather, as a late frost, &c. The corn crop requires a warm sun. We have seen the young leaves turn yellow, the effect of a late frost, and outstripped in growth by that later planted. If weather is dry, soak seed before planting, and roll in plaster. Some special manure should be applied to each hill, to hasten the early growth. A compost of ashes, plaster, and rich mould, such as scrapings of wood shed, soil from head-lands, &c., should be used, or poudrette, which has been found excellent, in the proportion of a good handful to every two hills, dropped and covered with the corn. Bran, as recommended in March number of Farm Journal, affords a valuable stimulant to the early growth.

Plant Potatoes for principal crop in this month. Guano in Chester county, has been proved to make a better potatoe crop than the best barn-yard manure.

Prepare ground to sow corn for fodder. In a dry spell of weather, often occurring after harvest, and

*I have seen an excellent old Farmer zealously waging war upon the fetid Chainomile (*Marula Odula*, DC.) under the mistaken belief that he was contending against that troublesome nuisance, the Ox-eye Daisy (*Lewanthemum vulgare*, Lam.) Some years since, a distinguished agricultural gentleman published a series of essays, for the purpose of rousing the farmers to a simultaneous attack upon what he supposed to be the *Canada Thistle*. It was soon discovered, however, that the plant which he had in view, was the comparatively harmless *Dipsacus sylvestris*, M.B. or Wild Teasel; and yet the *red Canada Thistle* (*Cirsium arvense*, Scop.) was then actually introduced, and spreading around him, unrecognized and unknown, either by himself or his neighbors!

when pasture is short, we have found this crop, cut in a green state, and fed to cows, to greatly increase the yield of milk and butter. . .

Avoid turning stock too soon to pasture fields. Sow one bushel of Plaster to the acre on all grass fields. Inspect fences all around the farm, and make them secure against the stock. Clean out and white-wash cellars, remove potatoes to barn floor, or other dry place, to retard their sprouting.

Cover manure in barn-yard, from action of sun and rains, or compost it with alternate layers of soil if not already done. Watch the stock on rank pasture, every morning, to guard against Hoven, which may be quickly relieved by hay rope, drawn tightly in the mouth, and extending back of the horns. The motion of the jaws, thus produced, liberates the gas in the stomach.

FRUIT ORCHARD.—Finish planting Fruit Trees, Strawberries, Raspberries, Grape Vines, &c., as soon as possible. Wash the bark of newly planted trees with mixtures, before recommended, to prevent their becoming bark bound.

Trees in blossom against walls or trellises, should be protected against late frosts, by covering with sheets, or shading with evergreen boughs, to keep off the sun's rays. Destroy webs and larvæ of insects. Mulch the ground under gooseberries, with coarse hay or litter, and sprinkle salt. Mulch Raspberries and Strawberries with spent tan bark. Shorten in Raspberry canes one-third, and dig in manure.—Apply salt to Quince Trees.

Caterpillars may be found close to body and limbs of trees, morning and evening, and before dew is off in morning, may readily be destroyed, with a brush or swab affixed to a pole.

Pyramidal Trees should be headed back, and useless shoots pruned away.

Renew with fresh manuring Grape vine borders.

Destroy ants with boiling water, poured into their holes.

VEGETABLE GARDEN.—Plant and sow such seeds as were omitted last month. Thin out early plantings of Beets, Carrots, Parsnips, Salsify, &c., and transplant from frames and warm borders, Tomatoes, Egg Plants, Pepper, Lettuce. Those tender of frost should be reserved till last of month. Sow Peas for succession crops at least twice in this month. Plant brush and pole Beans, the latter should have the poles set in first, and the beans planted around them. The ground being cleared of early crops of Radishes, Spinach, &c., should be prepared for Beets, Carrots and Cabbages. Keep the ground free from weeds, and stir frequently with hoe. Fine pulverization and frequent stirring of soil are indispensable to good gardening.

Plant Cucumbers, Melons and Squashes in open ground towards last of month. .

Sow a few Turnips for early crop, so as to get them of good size before heat of summer.

Draw earth up to stems of Cauliflowers, and water in dry weather.

Finish sowing seed of all kinds of pot and medicinal herbs. Sprinkle tobacco dust, unbleached ashes, or quick lime, every morning on such plants as are being injured by insects, till they are destroyed.

FLOWER GARDEN.—All such work as digging flower garden, laying sod, planting Box edging, &c., should be concluded the early part of this month.—Grass, plots will soon require mowing, which should be evenly and neatly done, at least once a month, from May till October. A well kept Lawn is a great ornament. Nothing but considerable practice will enable one to mow short grass as it should be.

Continue to plant flower seeds according to the directions given last month. Annuals that have been forwarded under frames, should have air admitted to them freely, and after the middle of the month finally transplanted to where they are to bloom.—Roses that have been kept under glass, may now be planted out; also, Petunias, Verbenas, Salvias, Heliotrope, Scarlet Geraniums. Plant Dahlia roots, but those which have been grown under glass, should not be set out till the latter part of the month. Plant Tuberoses, Gladiolus and Tiger flower roots.

Plants that have been wintered in cellars, should be brought out now. If they require re-potting, do it immediately. If the pots or tubs are as large as desired, take the plants out and reduce the roots considerably, and shake the old soil well out of them, re-pot with good fresh soil. Oleanders, Pomegranates and Myrtles do well if planted out in good rich ground to be taken up in the fall.

Pennsylvania Horticultural Society.

The stated meeting of this society was held on Tuesday evening, April 19th, in the Chinese Saloon, Dr. W. D. Brinkle, Vice President, in the chair. The display was unusually rich, and the Hall crowded with gratified visitors. The extensive tables of the society were completely covered with the many beautiful objects of exhibition. The imposing show of blooming plants was contributed from more than a dozen green houses, and presented one of the finest ever seen at a monthly meeting. Robert Buist's foreman brought a great number of interesting and rare specimens, several of which were new and shown for the first time. *Rhododendron javanicum*, a beautiful species, with flowers of an orange hue; *Gastrolobium Drummondii*, *Dendrobium Blandfordianum*. *Zieria trifoliata*, *Tetranthra Hengeli*, and *Ceanothus rigidum*. Of Standard plants, were a splendid specimen of *Pimelia spectabilis*, measuring twelve feet in circumference, and four feet high, displaying hundreds of trusses of flowers, a large and graceful *Acacia pubescens*, a very fine *Cuphea platycentra*, a handsome *Spirea Reersii*, and a dozen of the choicest *Cinerarias* of merit; and the new and beautiful seedling *Camellia* of N. J. Becar, of New York, called "Downing." The worthy proprietor of this plant proposes to dispose of the stock by subscription, at \$10 for

each plant, the proceeds to go towards procuring a portrait of the late lamented gentleman whose name it bears, to be placed in some Horticultural Hall in the United States. Mr. Buist will receive the subscriptions. Also a collection of indigenous plants in flower, very interesting. J. E. Knorr's gardener exhibited choice plants, which were not offered in competition. Of those shown for the first time, and new, were *Eschymanthus albidus*, *Azalea Reine des Belges* and *Delphinium Beauty of Chauronne* and fine *Cinerarias*, *Azalaes*, *Templetonia glauca*, &c.

Caleb Cope's gardener presented new plants for the first time, shown in bloom—*Rhododendron Gibsonii*, *Pimelia Terschaffeltii*, *Latnana lilacina*, *Minulus* species, raised from seed presented to the Society, from California, by Capt. W. McMichael; and *Caladium discolor*, the first plant seen in bloom, *Cineraria* Seedlings; *Azalea Smithii*, a beautiful plant, with many more of the choicest specimens. From Thomas Richardson, of New York, were beautiful plants—*Tropaeolum tricolorum*, gracefully trained over wire in a globular form, in full bloom; a decidedly pretty object; *Pimelia spectabilis*, and twelve select *Cinerarias*. W. W. Keen, gardener, of West Philadelphia, brought twelve handsome plants—*Euphorbia splendens*, *Calceolarias*, *Azalea proclara*, *Erica*, etc. Robert Scott exhibited a large collection, not in competition, in which were some of the choicest Roses. Adam Uber, a table of very fine *Pelargoniums*. Benjamin Gulliss, a large collection of Seedling Verbenas, &c.; also, twelve beautiful Roses. Charles Miller, a large table of *Calceolarias*. Peter Raabe, three large vases of Hyacinths, Tulips, and Narcissi; also, a fine display of Seedling Margarettes, a dwarf Apple tree, in profuse bloom. Moore & Warnick, Camden, a choice collection of plants. Robert Cornelius' gardener had a beautiful *Azalea indica* and *Mahernia odorata*. Martin Cundlach, a great number of Pansies. William Hobson, *Cinerarias*, Pansies and Auriculas. William Warnick, Camden, Pansies. H. Ingersoll's gardener, a specimen of *Diclytra Spectabilis*. Robert Kilvington, specimens of three native plants, raised from seed brought by Mr. Hermann and Dr. Kern, of Ex. Expedition—*Clatonia Perfoliata*—this species is used as a salad. *Pentstemon Mariana* and *Nuttalia* sp., H. C. Hanson, had shown for the first time, *Pinguicula lutea* and *Sarracenia Drummondii*. Capt. Marston, a basket of dried Immortelles, &c., very pretty. Handsome designs and bouquets from C. Cope's, R. Cornelius', and others.

On the Fruit Table were delicious Strawberries and Figs from Mr. Cope's conservatories; Pears and Apples from Mrs. J. B. Smith; and Apples from Robert Cornelius.

Of Vegetables, in Mr. Cornelius display, were forced Potatoes, Cucumbers, Cauliflowers, &c. In Mr. Cope's, Asparagus, Peas, French Beans, Tomatoes, and other esculents.

Premiums awarded on the occasion were: *Roses*—for the best twelve to Benjamin Gulliss. *Cinerarias*—for the best, and for the second best six, to Thos. Fairley, foreman to R. Buist. *Pansies*—for the best, and second best six, to Martin Cundlach. *Plants in Pots*—for the best twelve, to Thos. Fairley; for the second best to Thos. Meehan, gardener to C. Cope; for the third best, to Wm. Grassie, gardener to W. W. Keen. *Plant in a Pot*—for the best grown specimen, (*Pimelia Spectabilis*), to Thos. Fairley. *Indigenous Plants*—for best display to Thomas Fairley. *Plants shown for the first time in bloom*—a premium of three dollars, to Thos. Fairley, and another of two dollars, to Thomas Meehan. *Bouquet Design*—for the best formed of cut flowers, to Thos. Meghran, gar-

dener to R. Cornelius; for the second best to Thomas Meehan. *Basket formed of Cut Flowers*—For the best to Thos. Meghran; for the second best to Thos. Meehan; for the best formed of indigenous flowers to Thos. Meghran. And special premiums of two dollars each, for a beautiful *Tropaeolum tricolorum*, to Thos. Richardson's gardener. To Adam Uber for a display of *Pelargoniums*; to Charles Miller, for a display of *Calceolarias*, and of one dollar each, to Peter Raabe, for a display of Seedling *Marguerites*; and to Benjamin Gulliss, for a collection of Seedling Verbenas.

The Committee notice a collection of *Greapholiums* from Capt. Marston, and two plants, *Pinguicula lutea* and *Sarracenia Drummondii*, shown for the first time by H. C. Hanson.

Pears—For the best ten specimens, Saint Germain, to F. Guoin. *Apples*—For the best ten, Newtown Pippin, to Thomas Meghran. And a special premium of two dollars for a dish of Hovey's Seedling Strawberries, and another of one dollar, for two varieties of Figs, to Thos. Meehan. *Cucumbers*—For the best brace; *Cauliflowers*, for the best three heads, and *Rhubarb*, for the best twelve stalks, to Thos. Meghran, gardener to R. Cornelius. *Sea Kale*—For the best; and for the second best Rhubarb, to Thos. Meehan, gardener to C. Cope. *Display*—For the best by a private gardener, to Thos. Meghran; for the second best, to Thos. Meehan.

The Committee notice and call the attention of the Society to a specimen of hemp; manufactured from the fibre of the okra plant, which appears to possess remarkable strength and fineness of texture. It was shown by Thomas Dunlap.

AD INTERIM REPORT.

PHILADELPHIA, April 19, 1853.

To the President of the Pennsylvania Horticultural Society:

The Fruit Committee respectfully present the following ad interim Report:

Since the Stated Meeting of the Society, in March, the following Fruits have been submitted to the examination of the Committee:

From Dr. J. Marshall Paul, of Belvidere, N. J.—Specimens of six varieties of Apples:

1. *Name not known*—large; roundish oblate; red in stripes; of "good" quality.

2. Of medium size; roundish, inclining to conical; red in stripes on a yellow ground; flavor not particularly fine.

3. A New Jersey Seedling—small; oblong, angular; red on an orange-yellow ground; pleasant flavor; "good" quality.

4. Of medium size; roundish oblong; mottled and striped with red on a greenish yellow ground; has some resemblance to Herefordshire Pearmain, though inferior to it in flavor.

5. *Priestly*—of fine size, but partially decayed.

6. *Beautiful specimens of the Monmouth Pippin*—a native of Monmouth county, New Jersey. Although one of our best winter apples, it is not described in Downing's Fruit and Fruit Trees, of America, nor in Thomas' Fruit Culturist. A concise commendatory notice of it, however, is contained in Kenrick's New American Orchardist, and Barry's Fruit Garden. As it does not appear to be extensively cultivated, or generally known, although its productiveness, size, and quality, render it worthy of a place in every collection, we give the following description: Size rather large; roundish, inclining to conical; greenish yellow, with numerous russet dots, sometimes a few

crimson spots, and uniformly a red cheek; a stem of medium length, rather slender; cavity deep, open, slightly russeted; calyx large; basin deep, sometimes plaited; seed light greyish brown, rather large; flesh yellowish white, fine texture; flavor very pleasant; quality "very good," if not "best."

From R. H. Noll, of Lewisburg, Union county, Pa. Specimens of two varieties of Apples:

1. *The Adams*—A Pennsylvania Seedling which originated with James Adams, of White Deer Township, Union County, and noticed under the name of Noll's No. 1, in the ad interim Report for November last. Large; roundish oblate; faintly mottled and striped with red on a greenish yellow ground; stem half inch long and one-ninth to one-sixth of an inch thick; cavity broad, acute; calyx rather large, segments closed; basin wide, moderately deep, plaited; flesh greenish white, of fine texture, rather juicy; flavor pleasant; quality very "good." The specimens examined on the 11th of November were only regarded as good, being somewhat dry and mealy.

2. *The Major*—A native of Pennsylvania. This apple originated with Major Samuel McMahan, of Chillisquague, Northumberland county. Size large; roundish; red, sometimes blended with yellow on the shaded side. Stem variable in length, of medium thickness; cavity rather wide, moderately deep; basin uneven, shallow; flesh yellowish, crisp; flavor pleasant, agreeably saccharine, and resembles, in some measure, that of the Carthouse, to which, however, it is superior; quality "very good."

From Charles Kessler, of Reading.—Specimens of five varieties of Apples:

1. *The Hepler*—A seedling from the garden of Mr. Hepler, of Reading. Size under medium; oblate, inclining to conical; handsome, waxen yellow; stem rather long and slender; cavity wide, deep, acuminate, and considerably russeted; basin contracted, moderately deep, irregular, furrowed; flesh rather dry, but of pleasant flavor, quality "good."

The Zieber—A seedling from the premises of Mr. Samuel Zieber, of Reading. Size below medium; roundish; waxen yellow, with a striped red cheek, and a cicatrix on one side, extending from the base half way to the calyx; stem broken off; cavity slightly russeted, moderately deep and very narrow, with a small protuberance projecting into it; calyx small; basin narrow, rather deep; flesh somewhat dry, but pleasantly flavored; quality "good."

3. *The Never-sink*—A seedling found last Autumn, growing among the brush on the side of the Never-sink mountain, in Berks county Penn'a. Though not five feet high when discovered, its branches contained two bushels of apples, of most attractive appearance. Fruit large; roundish; exterior of an exceedingly beautiful waxen orange yellow color, with a few russet dots, and a delicately striped and richly mottled carmine cheek; stem very short and rather stout; cavity narrow, acuminate, shallow; calyx large; basin deep, rather wide, furrowed; seed greyish yellow, acute-ovate; flesh yellowish, somewhat tough, owing probably to the fruit being much shrivelled; flavor approaching that of the Pine Apple; quality "very good."

4. *The Marks*—A seedling apple from the premises of Mr. Marks, of Berks county, Penn'a. Size medium; roundish, tapering slightly to the crown, and somewhat angular; yellowish white, with a few russet dots, and nearly covered with a faint orange blush; stem half an inch long, a twelfth of an inch thick; cavity narrow, deep acuminate; calyx small closed; basin narrow, rather deep slightly russeted; seed yellowish grey; flesh whitish, tender, fine tex-

ture; flavor delicately perfumed; quality "very good," if not "best."

5. *The Pfeiffer*—A seedling of Spring township, Berks county, Penn'a. Size below medium; roundish; sparsely streaked with red on a yellowish green ground on the shaded parts, the streaks being more numerous, and on a fawn colored ground, on the side exposed to the sun; stem broken off in all the specimens, slender, inserted in a narrow, superficial cavity; calyx rather large; basin wide, moderately deep, plaited; specimens evidently unripe. The Pfeiffer is represented as being a very late keeping variety—the period of maturity extending to July.

From David Miller, Jr., of Carlisle.—*The York Imperial or Johnson's Fine Winter*—This apple is believed to be a native of York county, Penn'a. Size rather below medium; truncated-oval, angular; the unexposed side is mottled and striped, so as to present a greyish red aspect on a greenish yellow ground, and on the sunny side the color is a dull crimson; stem short, and moderately stout; cavity wide, and rather deep; calyx small, closed, and set in a deep, wide, plaited basin; flesh greenish-white, tender, crisp, juicy; flavor pleasant and agreeably saccharine; quality at least "good," to many tastes "very good."

From P. R. Freas, of Germantown.—*The Jenkins*—A native apple of Montgomery county, Pennsylvania, which originated with John M. Jenkins, of Hatfield township, near Montgomery square. Fruit small; roundish-ovate; red, interspersed with numerous large white dots, on a yellowish ground; stem half an inch long, slender; cavity deep, rather wide, sometimes russeted; calyx closed; basin deep, open, furrowed, core above medium; seed greyish brown, acute-ovate; flesh white, tender, fine texture, juicy; flavor agreeably saccharine, exceedingly pleasant and aromatic; quality "very good," if not "best." The Jenkins is one of those delicious little apples peculiarly fitted for the table, at evening entertainments. And, in conjunction with the Evening Party, will probably supplant the Pomme d'Api, on those festive occasions.

On motion adjourned.

THOS. P. JAMES,
Recording Secretary.

Chester County Horticultural Society.

The monthly meeting of this society was held as usual at the Horticultural Hall, on the second Saturday of the past month. J. Rutter, President, in the Chair.

Twelve varieties of Apples, embracing several new varieties were exhibited by the president; also, ten by Ziba Darlington, and two varieties of Pears.

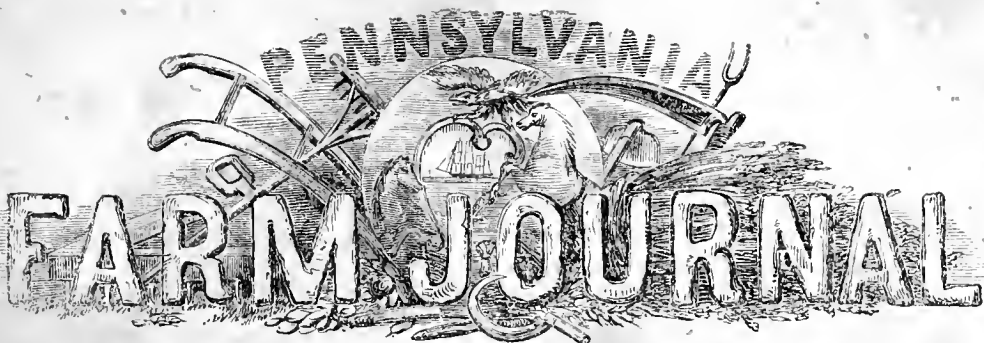
The first premium for the best display of Green House plants, was awarded to Paschall Morris & Co.; and also, for the best display of cut flowers.

Uriah V. Painter was awarded a special premium for a good display of Hyacinths.

Specimens of well grown Lettuce and Radishes, were exhibited by Richard B. Taylor, and Paschall Morris & Co.

Premium for the best head of Lettuce to Richard B. Taylor; do.; for the best two dozen Radishes to Paschall Morris & Co.

The time for holding the semi-annual Exhibition in June, was fixed for the 16th, 17th and 18th days of that month. Mr. and Mrs. Fergus were elected life members, and J. W. Hartman an annual member.



PENNSYLVANIA THE FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, Editor.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

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Prize Essay on the Production of Butter,

READ BEFORE THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

We lately extracted from the Quarterly Journal of the above society, for the Farm Journal, a prize essay on the abortion of cows, which excited very considerable attention, particularly with that portion of our readers, extensively engaged as dairymen. Extra copies of the Journal containing it were called for, and which thus contributed to its extensive circulation. We commence in the present number, from the same source, a prize essay on butter, which will be read with equal interest, as it embodies a series of accurate and valuable experiments, first as to the chemical constituents of milk, the changes in its composition and the amount, according to exercise and food, the general management of milk and cream in the best dairy districts of

England, the comparative quantity of Butter yielded by sweet cream churned alone, of sweet milk and its cream churned together, sour cream churned alone, sour milk and cream churned together, scalded or Devonshire cream churned alone, the proper temperature of cream, &c., and many other details of much importance to the dairyman. The essay will be concluded in another number.

The time has gone by, when the relations of science to, and influence upon agriculture in its broadest features, or most minute practical details, can be disregarded. The practical farmer owes a heavy debt of gratitude to the scientific investigator, whose labors and researches fully equal to those of the field, has made *system* out of chaos, has shown him the great ground work of all successful husbandry, and has explained the secret *principles* and the true *causes* of results, successful or otherwise, of even the most trifling apparently, and minute of the daily operations of the farm. Every successful farmer, whether conscious of it or not, who rears a fine animal, or grows a large crop, but proves the truth of scientific knowledge, but elicits a confirmation of the necessary connection between sound theory and successful practice. So far from there being any natural antagonism between these, their mutual dependence and close union is as unavoidable in point of fact as the reciprocal benefit is beautiful. The farmer, taking his isolated case of successful culture, generalises up to the *cause*, which science unfolds to him among her *immutable* laws, which, when thus understood, *regulate* his future *practice*. His scientific co-laborer, on the other hand, first lays down his broad *principles*, his rules for action and upon them, bases and proves his operations, as a *test* of their truth. These follow necessarily as effects follow causes, and thus science and practice go hand in hand.

In England, owing to a denser population, requiring absolutely less imperfect and wasteful culture, and to a greater concentration of wealth than in the United States, experiments in every department of agriculture, are conducted with a minuteness and

accuracy entirely unattainable here. Making every allowance for difference in climate and systems of farming, many of them are highly valuable to us, and we shall continue occasionally to give them through the Farm Journal.

MILK—the fluid secreted by females of the class mammalia, for the nourishment of their young—is a white, translucent, aqueous emulsion, the principal components of which are the oily compounds called butter, casein or curd, a species of sugar and certain salts.

Under the microscope milk appears as a transparent fluid, in which small white globules are diffused, of variable diameters, in the same milk, as well as in that of different animals. These globules collect upon the surface of the milk, when allowed to remain at rest, or *stand*, forming the substance known as cream. Some have supposed these to be naked globules of fatty matter; others consider that they are surrounded by a distinct containing membrane. The latter view is, in some degree, rendered probable from the circumstance that they do not coalesce by standing, or when gently heated, nor does either directly dissolve them; but when acetic acid is added to milk, it appears to dissolve the containing caseous or albuminous membrane, and the globules then coalesce into drops, which either readily takes up.

The specific gravity of milk varies; that of the cow is generally about 1.030. As it is affected by the presence of butter on the one hand, which diminishes, and the casein and salts on the other, which increase its density, it is difficult to ascertain a mean, or to form an estimate of its value by this means; all lactometers are consequently fallible as indicators of the value of milk.

According to Berzelius, the specific gravity of skimmed milk is 1.033, that of cream 1.024, consisting as follows:

SKIMMED MILK.

Water	928.75
Caseous matter, or curd, with a trace of butter	28.00
Sugar of milk	35.00
Hydrochlorate and phosphate of potash	1.95
Lactic acid, acetate of potash, and a trace of lactate of iron	6.00
Earthy phosphates	0.30
	<hr/> 1000.00

CREAM.

Butter	4.5
Curd	3.5
Whey	92.0

100.0

Haidler obtained from 100 parts of cow's milk

Butter	3.0
Sugar of milk, and soluble salts	4.6
Casein, and insoluble salts	5.1

12.7

and from 100 parts of milk, the produce of two cows, he procured the following salts:

Phosphate of lime	0.231	0.344
Phosphate of magnesia	0.042	0.064
Phosphate of iron	0.007	0.007
Chloride of potassium	0.144	0.183
Chloride of sodium	0.024	0.034
Soda	0.042	0.045
	<hr/> 0.490	<hr/> 0.677

As respects quantity and quality of milk, there exists a wide range, not only with regard to the yield from cows of different breeds, but also from cows of the same breed; the subject is still further complicated, owing to diversities either in the quality or quantity, or in both, caused by feeding on different varieties of food; which are again liable to variation with respect to the period of gestation at which the milk has been collected. Rapid changes in its character occur preceding and immediately after parturition.

Lessaign examined milk at ten different periods, four before and six after parturition. The milk examined during the first three of the former periods, namely, 42, 32, and 21 days before parturition, contained no casein, but in place of it albumen; no sugar of milk and no lactic acid, but a sensible quantity of uncombined soda. That examined eleven days before and just after parturition, contained both albumen and casein; while milk, eleven days before, and shortly after it, contained free lactic acid and sugar of milk, but no free soda. The milks examined 4, 6, 20, 21, and 30 days after parturition, contained casein and no albumen.

A valuable series of experiments was instituted by Dr. Playfair, for the purpose of ascertaining "the changes in composition of the milk of a cow, according to its exercise and food;" they are published in the first volume of the "Transactions of the Chemical Society of London," in the course of which the author expresses a regret, which all agriculturists must participate in, "that the value of the experiments is diminished by not being extended over a series of days on each kind of food." "But in England," the author adds, "where the price of ether is so exorbitantly high, the expense of such experiments is a serious consideration for a private individual." As these experiments are of the utmost importance, as guides to sound conclusion respecting the subject under investigation, the following extracts are subjoined:

The cow which was the subject of experiment was of the Short-Horn breed, and the period that had elapsed since calving unknown. When the experiments were instituted she was in good milking condition. In order to estimate the average amount of milk, it was measured several days previous to the experiments, during which time she subsisted upon after-grass, the meadow being about half a mile distant from the cow-house.

Evening's Milk. Morning's Milk.

	Quarts.	Quarts.
October 5	5	4½
" 6	5	5
" 7	4½	5
" 8	5	4
" 9	5½	4

The weather was fine for the period of the year, but the nights being rather cold, directions were given that the cow should be driven to the house, and remain there during the night. In the morning she was put out to grass, but brought back in the evening. On the evening of the 9th the analyses were commenced, and were followed up for successive days. In every case the specimen of milk analysed was taken from the milk pail after the cow had been thoroughly milked, and the milk well stirred.

1st day. The cow fed in the meadow upon after-grass during the day, was driven home to the cow-house in the evening; the milk then obtained amounted to four quarts; specific gravity, 1.034.

11.128 grammes* of milk gave—

		In 100 parts.
Casein	.611	5.4
Butter	.404	3.7
Sugar of milk	.429	3.8
Ashes	.068	0.6
Water	9.616	86.5
	11.128	100.0

The animal received nothing to eat during the night, consequently the milk of the morning must have been derived from the previous day's food.—The milk measured four and a half quarts; specific gravity, 1.032.

15.280 grammes yielded—

		In 100 parts.
Casein	.610	3.9
Butter	.864	5.6
Sugar	.468	3.0
Ashes	.091	0.5
Water	13.247	87.0
	15.280	100.0

2d day. The object of this day's experiment was to discover whether an increase of butter would be procured by feeding the cow with after-grass in the stall. It refused, however, to eat this food, and being from its companion, struggled for several hours to regain its liberty; to render it tranquil, a companion was introduced to the same stall, and it was then induced to consume 28 lbs. of good hay, and 2½ lbs. of oat-meal. The milk of the evening measured 3½ quarts; specific gravity, 1.031.

22.684 grammes yielded—

		In 100 parts.
Casein	1.124	4.9
Butter	1.150	5.1
Sugar	0.867	3.8
Ashes	0.137	0.5
Water	19.406	85.7
	22.684	100.0

The morning's milk amounted to 4 quarts, but owing to an accident was not analysed.

3d day. A. The cow was kept in the shed, and consumed 28 lbs. of hay, 2½ lbs. of oat-meal, and 8 lbs. of bean flour. The evening's milk amounted to 4 quarts—10.34 lbs.; specific gravity, 1.034.

23.160 grammes gave—

		In 100 parts.
Casein	1.262	5.4
Butter	0.905	3.9
Sugar	1.112	4.8
Ashes	0.136	0.5
Water	19.745	85.4
	23.160	100.0

B. The quantity of milk obtained in the morning amounted to 4½ quarts—11.61 lbs.; specific gravity, 1.032.

19.445 grammes gave—

		In 100 parts.
Casein	0.758	3.9
Butter	0.888	4.6
Sugar	0.877	4.5
Ashes	0.129	0.7
Water	16.793	86.3
	19.445	100.0

4th day. A. The cow kept in the stall as before, received this day 24 lbs. of potatoes (steamed),

14 lbs. of hay, and 8 lbs. of bean flour; she gave in the evening 5 quarts of milk—11.29 lbs.; specific gravity, 1.033.

17.820 grammes gave—

		In 100 parts.
Casein	0.707	3.9
Butter	1.190	6.6
Sugar	0.815	4.6
Ashes	0.104	0.6
Water	15.004	84.2
	17.820	100.0

B. The morning's milk amounted to 4 quarts—60.32 lbs.; specific gravity, 1.032.

19.641 grammes yielded—

		In 100 parts.
Casein	0.535	2.7
Butter	0.978	4.9
Sugar	0.991	5.0
Ashes	0.116	0.5
Water	17.021	86.9
	19.641	100.0

5th day. A. The cow kept as before, consumed 14 lbs. hay, and 30 lbs. potatoes (steamed,) she gave in the evening 5½ quarts of milk—13.18 lbs.; specific gravity, 1.030.

18.141 grammes yielded—

		In 100 parts.
Casein	0.716	3.9
Butter	0.845	4.6
Sugar	0.713	3.9
Ashes	0.099	0.5
Water	15.768	87.1
	18.141	100.0

B. The morning's milk amounted to 4½ quarts—12.20 lbs.; specific gravity, 1.030.

16.740 grammes yielded—

		In 100 parts.
Casein	0.600	3.5
Butter	0.835	4.9
Sugar	0.648	3.8
Ashes	0.082	0.5
Water	14.575	87.3
	16.740	100.0

Dumas, in an announcement to the French Academy, advanced the theory that the fat of animals is wholly derived from the fatty matter contained in their food. As the theory of the formation of fat is of the first importance in dairy-farming, Dr. Playfair makes the following just observations with reference to the preceding experiments:—

1. On the second day the cow received 28 lbs. of hay, which contained 0.46 lbs. of fat, and 2½ lbs. of oat-meal, containing 0.050 lbs. of the same constituent. The cow produced (calculating according to its specific gravity) about 19 lbs. of milk, in which were 0.969 lbs. of butter. But the food altogether contained only 0.486 lbs. of fat, so that 0.483 lbs. of butter must have been produced from other sources.

2. The food received by the cow on the 3d day consisted of 28 lbs. of hay, 2½ pounds of oat-meal, and 8 lbs. of bean-flour.

28 lbs. of hay	contain	0.436 lbs. of fat.
2½ " oat-meal	"	0.050 "
8 " beans	"	0.056 "

In the food 0.542

The milk of the evening amounted to 10.34 lbs. and contained 0.4 lbs. of butter; that of the morning to

*A gramme equals 15.434 English grains.

11.61 lbs., and contained 0.5 lbs. of butter; the whole amounting to 0.9 lbs., of which only 0.542 lbs. could possibly have been furnished by the food, assuming that the fat in the food could only be converted into butter.

3. The cow received on the 4th day 14 lbs. of hay, 8 lbs. of beans, and 24 lbs. of potatoes.

14 lbs. of hay	contain	0.218 lbs. of fat.
8 " beans	"	0.056 "
24 " potatoes	"	0.072 "

In the food 0.346

The evening's milk amounted to 12.9 lbs., and contained 0.86 lbs. of butter; that of the morning to 10.32 lbs., and contained 0.50 lbs. The cow therefore, furnished during the day, 1.36 lbs. of butter.—The fat in the food only amounted to 0.346 lbs., therefore 1.064 lbs. must have been obtained from other sources.

4. On the 5th day the cow received 14 lbs. of hay, and 30 lbs. of potatoes.

14 lbs. of hay	contain	0.218 lbs. of fat.
30 " potatoes	"	0.090 "

In the food 0.308

The milk of the evening amounted to 15.18 lbs., and contained 0.606 lbs. of butter; that of the morning to 12.20 lbs., containing 0.597 lbs. of butter. The cow, therefore, furnished 1.203 lbs. of butter. The fat in the food amounted only to 0.308 lbs.; hence 0.895 lbs. of butter must have been produced from other sources.

From the preceding calculations it is presumed that the excess of butter, beyond that contained in the food, has been produced by a separation of oxygen from the elements of the unazotised ingredients of the food, such as starch and sugar, in the manner pointed out by Liebig.

In the preceding experiment there are several variations; this will ever be found the case where so much depends upon the health and disposition of the animal, over which man can possess little, if any control; many circumstances may pass unheeded by the observer, which may powerfully influence the character of the milk. It will be seen that in the milk of the first day there is a small amount of butter. The cow had been exposed in the field during the day, and hence required a greater quantity of unazotised food to support the heat of her body than would have been necessary had she been protected from the cold; but in the evening she was removed into a warm, well littered stall, where the warmth thus communicated was equivalent to a certain amount of food; hence we find that the milk of the morning was considerably richer in butter. Besides the warmth of the shed, less butter is consumed by the oxygen of the air. In the stall, the respirations of an animal are much less frequent than in the field, and consequently less oxygen enters into its system. Hence it is a practice to milk those cows in the field that are distant from home, and to drive home to be milked only such cows as are close to the shed. The exercise required in walking home causes an increased play of the respiratory system, and therefore increases the amount of oxygen inhaled. This oxygen unites with part of the butter and consumes it; all good dairymen allow the cows to walk home at their own pace, and never accelerate it. When a cow is harrassed, and runs to escape from the annoyance, her milk becomes very much heated, diminishes in volume and in richness, and speedily becomes sour. This is a fact well known to all dairymen. During milking; the cow inhales a large quan-

tity of oxygen; this unites with the butter, the heat evolved by its combustion elevates the temperature of the milk, and acetous fermentation being induced, the milk thus becomes sensibly sour.

The view here taken of the production of butter, from the amylaceous and other unazotised portions of the food, is supported by the increased amount of butter yielded, after being partially fed upon potatoes. The quantity of casein in the milk appears also to be intimately connected with the nature of the food, being more abundant when supplied with bean and oat-meal; and would justify the conclusion that within certain limits the quality of milk may be made to vary in its composition, by regulating the food of the animal.

As the preceding experiments may be looked upon as being on too limited a scale to draw a just conclusion, I will here insert what was pointed out to me as a remarkable instance in practical dairy management, in the county of Chester, which is strongly confirmatory of the previous views:—

It has been remarked in Cheshire, and I believe in other extensive cheese districts, that it is impossible to make cheese of the first quality from milk obtained from cows fed upon tares and clover; notwithstanding which, I had pointed out to me a farm where the whole of the cows were fed, almost exclusively during the summer, on tares and clover, the entire produce of which dairy was converted into cheese, and that of a quality so excellent, that it always obtained the highest price from the London dealers at the Chester cheese fairs. The circumstance was related to me as an illustration of what could be accomplished by management,—the dairywoman being esteemed one of the best hands in that celebrated cheese making county. My own conclusions were, that mere manipulation had little to do with it. The best cheese is a compound of cheese and butter. When the cattle were fed at large on leguminous food, rich in casein, that substance greatly preponderated in the milk, the butter being partially consumed by the animal in the course of the exercise requisite to procure its food, &c.; when fed in the house with the like food, the butter was necessarily yielded in greater proportion, consequently formed a rich fat cheese. In concluding these observations on milk, it must be remarked, that the milk obtained from different breeds varies greatly with respect to the quantity of butter which it contains, and still more with respect to the milk drawn from the cow at the commencement, and near the conclusion of the milking, the latter being provincially termed "stripings," and "afterings." Schubler says that the milk last drawn contains three times as much cream as the first. Dr. Anderson found the cream in the last cup of milk drawn from the udder, compared with that of the first cup, in the proportion of 16 to 1; it is consequently of the greatest importance that the cow should be milked perfectly "dry at each meal." For another reason this ought to be carefully attended to; when the larger vessels are regularly emptied, milk is being constantly secreted by the capillary milk vessels; when, however, from any cause the whole are allowed to become gorged for a lengthened period, this secretion ceases, and absorption of the thinner, or watery portion commences. It may easily be conceived that this absorption takes place more readily in the smaller and more distant tubes, than in the larger and more external vessels. If this full state of the vessels continues any length of time, the secretion of milk will cease or diminish, not infrequently attended by serious inflammation; materially impairing, or alto-

gether destroying, the function of the milk gland.

In milking, the cow should be milked "clean" at once; some are in the habit of doing this at twice or thrice. The cow is a sensitive and capricious creature, easily offended; and if the dairy maid rise from her before the milk is all withdrawn, the chances are that she will not stand quietly, with the further probability that she will *hold back* her milk the second time. When there are more than one dairymaid, each should have a particular set of cows apportioned to her; cows preferring to be milked by a constant acquaintance rather than by a stranger. During the flush of grass, when the cows are loaded with milk, it may be well always to go round a second time, by which means frequently a tea-cup full to half a pint of milk can be obtained.

Milking should be done *fast*, to draw off the milk as quickly as possible. From the period of drawing the first milk from the heifer, to the time she is intended "to be put up," for the butcher, gentleness and kindness should be exercised towards her. No doubt some cows are very capricious and troublesome—such ought to be sold, or sent to the slaughter-house as soon as possible; if a cow can not be managed with kindness, thumps and kicks will be found of no avail. Some cows yield their milk with a copious flow on the gentlest handling, others require great exertions. The udder of the former will have a soft skin, with short teats; that of the latter will possess a thick skin, with long and tough teats. Before leaving this part of the subject it may be mentioned, that in some parts of Switzerland and France, it is not an uncommon practice to spay milch cows whilst in a full flow of milk, a short time after calving, by which means they continue in milk some years.

Celery.

The production of good Celery is a point well worthy the care of the gardener. Few vegetables are more highly prized or require so much attention from the time the seed is sown till it is furnished to the table. The drouths of summer and the severe frosts of winter are alike injurious to it; and to ensure a crop, the soil must be in the best condition. Moisture is essential to its cultivation, and a supply of well fermented manure or rich compost is one of the first conditions towards success. An open, free, loamy soil sufficiently rich in vegetable matter will suit it. Stiff tenacious clay is to be avoided, as it binds too much, and prevents the free development of the plant; such soil also induces canker, while free sandy loam, with a sufficient supply of well decomposed manure, will raise it, free from this. As a large quantity of manure must be supplied with the crop to ensure its rapid growth it is not essential that the soil should be previously very rich, its physical condition is more important. In choosing a piece of ground for Celery it is advisable to take into consideration the nature of the crop that may follow, so that the best advantage may be taken of the high cultivation generally applied to it. The ground where good celery has been raised will be capable of producing any crop requiring highly manured soil, the following season. A very successful plan is adopted by some gardeners to secure a shade for the young plants; they plant a row of peas or corn between the trenches, which is taken off the ground before the soil is required for earthing up.

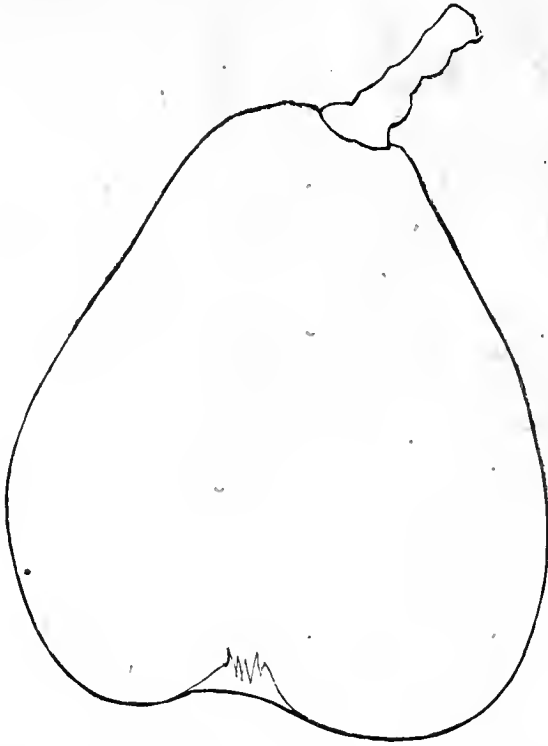
When the ground has been chosen, mark off a space of five feet in width, and open a trench eighteen inches wide, throwing out the surface

soil a spade deeper, spreading it over the ground equally. In the bottom of this trench deposit the manure or compost. Farm-yard manure, night soil, hog pen manure, and other well decomposed material, is the best for this vegetable, which depends for its perfection on quick and luxuriant growth. This should be well incorporated with the soil and reduced to a fine state for the reception of the plants. Plant them in double rows in the trench at eight inches from plant to plant, and about four inches between the rows; the plants should be alternate in the rows. Care must be taken in removing the plants not to reduce the roots too much, they may be removed without being checked by lifting them with a garden trowel. The soil about the young plants should be made as fine and mellow as possible. The middle of July is quite soon enough to plant out the general crop of Celery in this climate; they cannot endure a much longer summer, and by planting earlier nothing is gained. The soil must be frequently stirred to keep down weeds and admit the air. It is not advisable to earth up until the plants have attained a good size; as they do not keep well during the winter when they are earthed up too soon in the season. Very good Celery is grown and blanched without earthing, until the final covering is put on for the winter. Such as is not required for use until the latter part of the season may be safely treated in this way, as it will be sufficiently blanched by being covered during winter. A portion for immediate use must be earthed up as soon as the plants attain a height of six or eight inches. This operation must be carefully managed, taking care to keep the soil from getting into the heart of the plant. The most certain method is to fold the leaves closely together with one hand, while the soil is drawn up around them with the other.

The first earthing is the most important. If this is properly attended to, the succeeding ones are not so likely to be mismanaged. The five feet space is used for the purpose of covering up for the winter. Where such a space is left, it is not necessary to remove the plants from the trench, as is sometimes done; but they may be covered up as they stand. The great danger is from rotting when covered up in this way, and to prevent this the soil must be made so compact as to prevent any water from entering. In a very severe season, boards are placed over the ridges. When the stalks are removed from the trench they are placed on the ground upright, and banked up with dry soil to a sufficient depth to exclude the frost, and covered with straw or boards. If covered when dry they are not likely to rot, and are well blanched by the latter end of winter. That portion of the crop for early use may be secured in a sparato trench, may be deposited in a dark part of the cellar.

There are only two or three varieties of Celery cultivated to any extent in this vicinity, of which Seymour's White Solid is the most useful. The Red Solid is cultivated to some extent, but is not found so suitable as the White, and is not so much used now as formerly. There is a great difference in the quality of seed depending upon the stock from which it is grown. It is a seed which disappoints many persons in not germinating readily; a bed sown one week may come up freely, while another sown the following, from the same package, and on similar soil, may disappoint. Moisture in the soil is important.—[New York Agricultur.

Crush the caterpillars in the egg, and you will save much time and injury.



Beurre d'Arenberg.

The above engraving is a correct outline of one of our very best Winter Pears, very productive, ripens readily, and grows finely on both Pear and Quince. It is sometimes confounded with Glout Moreceau, which it resembles in the color of bark. This latter, however, has a sugary flavor, while the Beurre d'Arenberg is of the sub acid or vinous character, and with leaves more deeply serrated. It is a Belgian variety, obovate, narrowing to the stalk; skin thick, greenish yellow, yellow at maturity, with spots of russet; stalk short, half to one inch long, thick and fleshy towards insertion, calyx small, in a deep basin. Flesh buttery, melting with a rich vinous or sub acid flavor. Ripe in December and January.

The New Rochelle Blackberry.

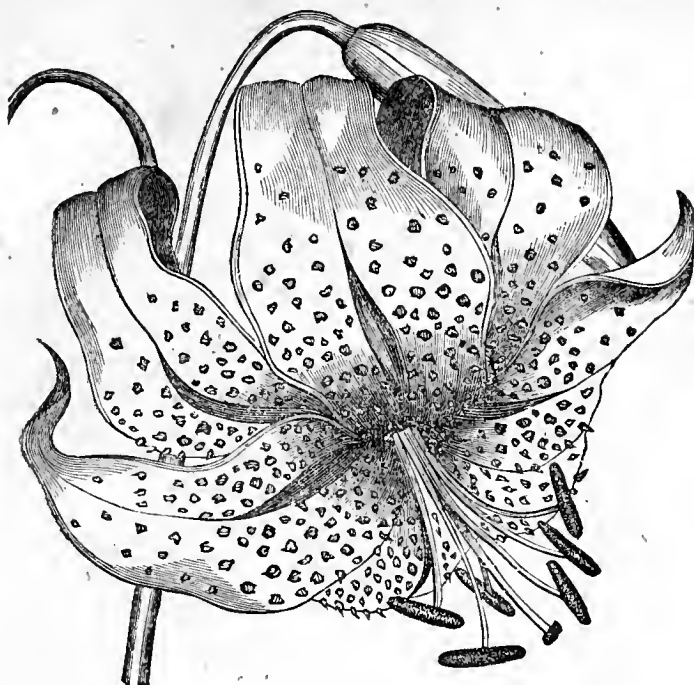
"The Secretary reminded the Chair that Mr. Lawton, of New Rochelle, Westchester county was present, and he was the gentleman who exhibited a remarkable stalk of a blackberry, which was then on the table; whereupon the Chair requested Mr. Lawton to give the Club some information regarding this remarkable new variety of fruit.

"Mr. Lawton stated that one of his neighbors discovered, some six or eight years ago, a bunch of blackberry vines, by the side of the road, of different quality from the common high blackberries, and so much superior that he was induced to transfer them to his garden. From this small beginning they have been propagated as much as possible. Mr.

L. first obtained them in 1848; it is his intention to set ten acres as soon as he can get the plants. He stated that the stalk exhibited had been headed back, so that it resembled a bush four and a half feet high, with a spreading head, which he presumed from his knowledge of the general yield, had borne a gallon of fruit.

"The character of these berries is very unlike the fruit of the common high blackberry vines, which is so long and full of seeds, while the new variety is nearly round, very pulpy, the pipe being large, in which the seed are entirely hid from view. He stated that he had measured many berries that were three inches round; that the general size and shape were as near like Hovey's seedling strawberries, as anything he could compare them to. The flavor of the fruit is sweet and rich, to a remarkable degree, and vines long bearing. His first crop ripened July 28th, and continued till the second week of September. The next, August 4th, and continued four weeks. Last summer, owing to the great drouth, they only continued about three weeks in full bearing. The vines grew almost equally as well in shade as in open ground; and if an opportunity is given, will climb twenty feet into a tree.

"Mr. Lawton sold his berries last summer to a New York dealer for ten cents a basket—equal to about twenty-five cents a quart—the buyer picking them himself. It is the opinion of Mr. Lawton, that this is an entirely new variety of the blackberry; and besides the greater value of the fruit, they bear garden culture much better than the other, or common variety. The demand for new plants is greater than can be supplied at present moderate rates—the price now being fifty cents."—[Agricutor.—New York Farmers' Club.



Japan Lilies.

The Lily, from time immemorial, has been the theme of the poet, and the subject of sweet allusion by men of taste and learning; frequently and beautifully is it referred to in the scriptures, for its exquisite fragrance and loveliness, and for *magnificence*. Divine authority has declared "that Solomon, in all his glory was not arrayed like one of these."

It is not my purpose, at present, to enquire whether the species or variety thus sublimely spoken of, was the *LILLY OF THE VALLEY*, belonging to the genus *Convallaria*, as some have supposed; the *Lilium candidum*, of Pliny, or the splendid tribe with which this chapter is introduced to the notice of your readers.

Of the many remarkable plants imported into Europe, within the last half century, few can claim such pre-eminence for beauty as the Lilies discovered by Dr. Von Siebold, during his researches in Japan, in the years 1831 to 1833; and it is no exaggeration to state, that none have since been introduced, more deservedly popular, or more highly attractive.

Dr. Von Siebold informs us, in his *Flora Japonica*, that he brought with him from Japan, more than 20 kinds of Lilies, the most conspicuous of which, however, are the *Lilium speciosum*, (sometimes called *rubrum*), the *L. lancifolium album*, and the *L. lancifolium punctatum* or *roseum*. All these have reflexed petals, and may be briefly described as follows:

LILium SPECIOSUM.

Showy Crimson Japan Lilley.—Flower, ground color, clear rose, shading to white, covered with numerous projections of bright crimson, and which gives it the appearance, as Dr. Lindley remarks, of being "all rugged, with rubies and garnets and crystal points," a plant of two to three feet in height.

LILium LANCIFOLIUM ALBUM.

White Lance-leaved Lily.—Flower, pure virgin white, crested with the same peculiar projections as

the former species, but these are without color, and which may be compared to frost work and snowy stalactites; grows to the height of three or four feet.

LILium LANCIFOLIUM PUNCTATUM, OR ROSEUM.

Spotted Lance-leaved Lily.—Flower large, white; the petals stubbed with pale rose or blush projections and beautifully spotted with rose-color. The plant is of more robust habit than either of the sorts named above, often attaining to the height of four or five feet.

The virgin whiteness of the *album*, the roscate leopard-like spotting of the *punctatum*, and the jewel-like brilliancy of the *speciosum*, all redolent with the fragrance of Arabian spices, will ever render these, objects of especial favor and admiration, and place them among the very choicest plants of the conservatory, or flower garden.

SOIL.—In cultivating these new Lilies, the following soil will be thoroughly adapted: two parts from an old hot bed, composed of leaves and horse manure, at least two years old; one part rotten sods, or any good mellow loam; one part sandy peat; (if not sandy it will be well to add a little sand.)

POTTING AND SHIFTING THE BULBS.—About the middle of January, these will commence vegetating, when they should be potted in small pots, repotting or shifting them to a larger size every two months, or as often as the pots are filled with roots—always remembering that perfect drainage, and plenty of it, are indispensable to success.

PROPAGATION.—By seeds, which are obtained in abundance in this climate, if the pistils are fertilized. These should be sown as soon as ripe, in shallow pans, in which they may remain for one or two years; they should then be transferred to six inch pots, four to six bulbs around the edges of the same—and finally, singly, in pots for flowering.

BY OFF SETS AND BY GONG BULBS:—These are formed at the crown of the old bulb, and also at the

axils of the leaves. Their growth is accelerated by the placing of pieces of peat around the stem.

By SCALES, from the outside of the bulb, potted in the peat and sand, and subjected to a slight heat; these do not vegetate rapidly, but eventually make good bulbs, and those scales may be divided longitudinally into two or three parts with the knife, each one of which will form at the bottom a new plant.

HARDINESS AND ADAPTATION TO THE OPEN GROUND. That the Japan Lilies and their offspring, may become tenants of our gardens, and sufficiently hardy to endure our climate, is much to be desired. The scarcity and high price of these have, until recently, been a hindrance to much experience in this respect. I can, however, state some facts, which give great reason to expect that they or their hybrids will prove so. Soon after the introduction of the *L. speciosum*, a bulb stood the winter perfectly well, protected only by a pot, in the garden of a gentleman in this city—and I learn that one of the same sort has, for two or three years, remained uninjured in a garden in the city of New York. My own experience is quite encouraging. Eighteen bulbs were planted in the open ground last November, in a bed of Tree Pæonias, between the rows; these were covered with four inches of peat, and when the ground closed up, about the same depth of sea-weed was added to the covering; every bulb is alive, and now making vigorous growth. It is sufficiently evident, that if the Japan Lilies prove hardy; their culture in the open ground, and in a deep rich border, will be of the easiest description.—[M. P. Wilder.

Left Handed Plough.

MR. EDITOR:—As the time will soon be here when the farmers will begin to look about for Ploughs, I would ask permission to make a few remarks upon the kind to be used. In my wanderings through suckerdom I have made some little observation. When in a neighborhood of real go-ahead enterprising farmers, (those who have thrown the stone out of the bag,) I see mostly used the left handed plough for breaking. Where there are good barns, neat dwellings, fine stock and large meadows, I see the left handed plough. Well, says one, where is the great advantage of the left handed plough? Well, in the first place, the same team will break more ground, and do it better, than with the right handed plough; how is this? your lead horse walks in the furrow, while your off horse walks on the hard ground, consequently your plough always cuts the same width of furrow; whereas with the right handed plough your lead horse walks near the furrow, and the nearer the furrow he walks, the less the plow cuts, and when the ground is very hard, he is sure to step into the furrow, (for some horses have more sense than some folks,) in so doing he pushes the off horse on the ploughed ground, and thus throws the plough entirely out, consequently the land is as full of gouts, as badly spun yarn, and in finishing a land the team has to be turned several times at different places, or go over the same ground several different times. All these difficulties are avoided in the left handed plough. With your lead, or near horse, in the furrow, and the off horse held to his place by a jockey stick, extending from the leader's breast to his bit, let the ploughman be ever so careless, the plow continues to do its work with uniformity. Another consideration of importance, almost any horse can be taught to go by

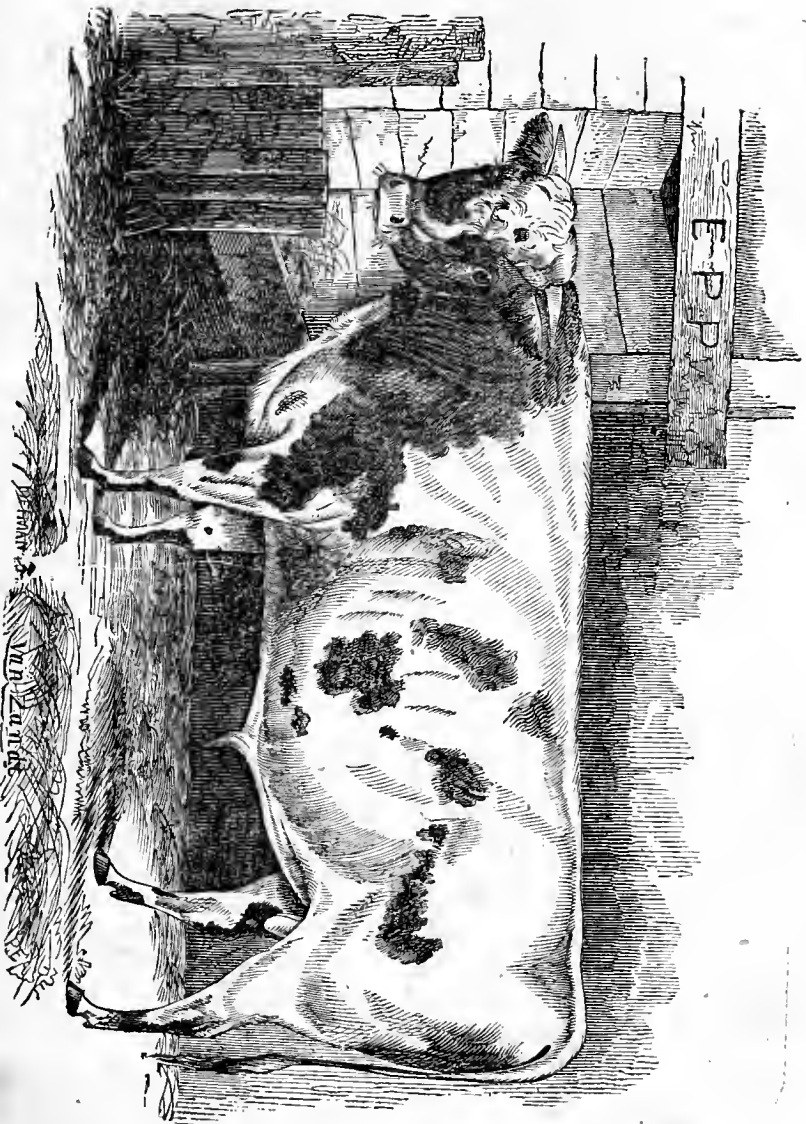
the single line. When a field is broke as it should be, the dirt is thrown from the fence, whereas with the right handed plough, it is thrown to the fence, so there is left a ridge six or eight inches high all round the field, first by being thrown there in breaking, and secondly by cleaning the ploughs in cultivation. [Prairie Farmer.

New Poultry Book.

A new work on Poultry, to be issued in numbers, has lately appeared in England, as we notice by a review of the first two numbers, in the Gardeners' Chronicle. It is splendidly illustrated with colored plates, elegant enough for the drawing-room table," and the first chapter is occupied with the history of the Shanghai or Cochin China, with very detailed definitions and descriptions of true specimens. For the information of our friends, interested in breeding Poultry, we quote the following remarks of the reviewer. It would appear "that the long, double ear lobe, immediately below the deaf ear," is one of the most important *points* of a genuine Shanghai, and that the *tails* are to be *curtailed*, if not absolutely dispensed with.

"As regards some of the details to which it refers we may mention that from 8 to 10 lbs. each should have been stated as the *extreme*, not as the ordinary weight of Cochin China hens. We do not believe it is the average of any yard in England, and it is far beyond any except where the birds are wrongly fed, and the bad practice of giving meat and liver is adopted. The adoption of weight as the true criterion of merit has caused much evil, and we cannot for a moment agree with the idea, that any standard of weight should be erected, according to the quotation in Mr. Sturgeon's letters. To ensure weight, unnatural feeding is resorted to, and birds, properly granivorous, become carnivorous in their habits; hence, a disease of internal fat, which has lately carried off many of the best birds in England, and is far more fatal than (if it is not often the cause of) what is called the Exhibition Fever. Weight can never be a criterion unless allied to every other point of excellence; if it once becomes the main point, then feeding for three weeks prior to the exhibition will always attain it, to the destruction of the bird, and the loss of the unlucky weight who may purchase. There is an important omission in the characteristics of the Shanghai hen: the long double ear-lobe immediately below the deaf-ear has escaped notice. The tail question in the cocks is hardly fairly treated, it is true "no tail at all" has been asked for, and is still a desideratum. Probably Mr. Andrews, of Dorchester, has come nearer to it than any one else. We do not like either sickle or scimitar feathers. All birds honestly exhibited have two long feathers in the middle of the tail, but they should be reversed and lie flat, rolling over like those of an ostrich. It will not, we think, be denied that the exuberance of tail is a mark of coarseness, and often of degeneracy; and as it is undeniable tails have been trimmed for exhibition, it should be the aim of a writer to destroy every possible excuse for such practices.—[London Gardeners' Chronicle.

Education is the proper employment, not only of our early years, but of our whole lives.



Ayrshire Bull, Dundee the Second---The Property of E. P. Prentice, Mount Hope, near Albany.

Ayrshire Bull, Dundee the Second.

The Property of E. P. Prentice, Mount Hope, near Albany.

We are indebted to E. P. Prentice, Mount Hope, near Albany, for the opposite engraving of his Ayrshire Bull, Dundee Second, winner of the first prize in 1851, at Rochester, as a one year old. The engraving was taken a few months afterwards, and as E. P. Prentice writes us, "hardly does him justice." His sire was "Dandy," imported by Samuel G. Ward, Lenox, Mass., and his dam the imported cow Ayr., so that his blood is pure on both sides. We are informed the progeny from "Dandy" have proved to be superior milkers, and we should expect that of the Bull before us, from his pedigree, to fully represent the character of the Ayrshire breed in this respect. It is a great question, yet unsettled, and deserving the especial notice of our agricultural societies, which is the best *breed* of cows for the dairy. The individual excellencies of an animal, no matter how great her yield, are of not so much importance, as which is the best *breed*, or which most generally and *invariably* produces the most milk and butter. This is an interesting question, about which there is much variety of opinion. We see and hear occasionally of individual animals producing a very large yield, and which is adduced in proof that the Durham, Devon, Alderney or Ayrshire, as the case may happen, are the most profitable for the Dairyman. Such instances do not prove much, but leave the question still an open one, to be settled by long continued observation and experiments, and we suggest that our State agricultural societies should appoint a standing committee, to institute experiments and collect facts, tending to show in an impartial report, which of all our improved *breeds* of cows, is the best for the *Pail*. If the milking property has become *fixed* in any one *breed*, and is something more than merely an accidental property it ought to be known. The yield for the *whole year* should be taken into the account; the pasture, feed, and other circumstances properly weighed and considered. A cow giving twenty to thirty quarts for a few weeks, and then going dry, would not be so profitable, as a smaller yield, continued through the season.

It is contended by the advocates of the Ayrshires, that *more invariably* than any other breed, are they good milkers. Aiton, in his agriculture of Ayr, Scotland, says, "the Ayrshire is the most improved breed of cattle to be found on the Island, not only for the dairy, in which they have no parallel, under a similar soil, climate, and relative circumstances, but also in feeding for the shambles. They are in fact a breed of cows, that have by crossing, coupling, feeding and treatment, been improved and brought to a state of perfection, which fits them above all others yet known, to answer in almost every diversity of situation, where grain and grasses can be raised

ed to feed them, for the purposes of the dairy, or for fattening them for beef."

This is strong praise, and which we should be glad to hear that experience with them in the United States, would sustain. Professor Low, in 1841, says of them, "that they had spread over a large tract of country, and by continued mixture with one another, acquired such a community of characters, as to form a distinct and well defined breed." The origin of the Ayrshires is in some doubt, but it is generally supposed to have resulted from a cross of the native stock, with the Alderneys, and perhaps the Short-Horns.

Col. Le Conteur in his paper, on the Alderney cow, says "he has noticed Ayrshire cows that seem to be of Jersey or Alderney origin."

Stephens, in his book of the Farm, remarks, "they are in such high repute for milking qualities, that most of the nobility throughout the kingdom are furnished with them."

The information that we have as to their milking qualities in the United States, would seem to confirm their reputation in Great Britain, but is as yet too imperfect to settle the question, that they are the *milking breed*. Ayr, the dam of Dundee Second, has given on grass feed only, twenty quarts of milk a day, and continues in milk till near calving. One of the Ayrshires imported by the Massachusetts agricultural society, produced sixteen lbs. of butter per week on grass feed.

Colman, in one of his reports on the Agriculture of Massachusetts, speaks of an account being kept for several months in succession, of the milk given by four Ayrshire cows. One of them, whose account was carried through the year, yielded 3,864 quarts of milk, beer measure.

On the whole, we know enough of the Ayrshires, to make us anxious to know a good deal more, and shall be obliged by any information from those who have had experience with them.

We have by us, an engraving of "Ayr," the mother of Dundee Second, also furnished us by E. P. Prentice, and which we shall insert in the next number of the Farm Journal.

Deodar Cedar.

When, at the instance of the late Lord Auckland, at that time Governor-General of India, the Court of Directors ordered a large quantity of seed of the Deodar to be imported annually for distribution, here, a service was rendered to the United Kingdom the extent of which cannot, as yet, be estimated. Enough, however, has been seen to assure us that we have acquired in some abundance an evergreen tree of singular beauty, perfectly hardy in these latitudes, and so unlike any other coniferous plant in its manner of growth as to add a new feature to the rich vegetation of these islands.

We now learn with great satisfaction that the East India Company has ordered a ton weight of the seed of this tree to be placed at the disposal of Govern-

ment for the service of the Woods and Forests, and that the first parcel has already arrived. Should all this quantity vegetate no fewer than 16,000,000 plants will have been acquired, and thus we may expect the hills of Great Britain to be speedily clothed with the sacred Cedar of the Brahmins; or making every allowance for deteriorated seeds, the produce to be raised must necessarily be prodigious. The charge of rearing it having been confided to four eminent nurserymen—Messrs. Glendinning, of Chiswick; Lawson, of Edinburgh, Skirving, of Liverpool, and Waterer, of Knap-hill—we have security for the crop being skilfully managed, which no one would have guaranteed if the seed had been placed in the hands of the present Deputy Surveyors of the Royal Forests.

Government will thus become possessed of a very large quantity of a fast-growing tree, the value of which cannot be over-rated, whether it is regarded as a nurse, most useful for protection, and profitable for thinning, or, according to the testimony of those who are familiar with it in India, strong and durable as timber.

We apprehend that no hardy tree yet known has the same high value as the Deodar, as a nurse. The Scotch Pine is so heavy and compact in its foliage that it keeps light off the deciduous trees which grow among it, and offers great obstruction to the free circulation of air, doing about as much harm in this way as it effects good by giving shelter from heavy gales. Its poles too are so bad that it must always bear a very low price in the timber market. Larch, which is a far better nurse, because its light airy foliage and pyramidal form offers no hindrance to the action of light and the free circulation of air, and whose poles usually fetch a good price, has the fault of being destitute of leaves in the early spring, and is, moreover, subject to the mysterious and incurable "rot." On the other hand the Deodar combines the graceful form and rapid growth of the Larch, with the evergreen character of the Scotch Pine, without the faults of that species, and we have every evidence of every observer who has seen it in India, that its timber is of excellent quality. As that is a very material point, and since we have occasionally heard it suggested that because the Deodar is nearly related to the Cedar of Lebanon, its timber will probably partake of the bad quality of the latter, it seems worth while quoting the opinions of those who are personally acquainted with it. That no inference can be legitimately drawn from the supposed relationship of it to the Cedar of Lebanon is sufficiently shown by the Scotch Pine and the Pinaster. They also are nearly related; and yet the old timber of the first has great durability and strength, while the latter is at all ages worthless for any purpose except fire-wood. A similar but more striking contrast is offered by the Pinaster and *Pinus hispanica*, species surely more nearly allied than the Deodar and Cedar of Lebanon. Now we have the evidence of Captain Widdrington that the latter was largely used in the Spanish navy for deck-planking, a purpose to which Pinaster timber could never be applied.

The positive testimony of Indian travellers seems conclusive as to the durability and excellence of Deodar timber. Baron Charles V. Hugel, now Austrian Minister at Florence, a good judge of such matters, saw the tree in abundance, and he calls it "the incorruptible Himalayan Cedar, the invaluable Deodar." Major Madden, than whom no one has more carefully investigated the history of Himalayan Conifers on their native mountains, quotes this very ex-

pression of V. Hugel, and evidently assents to it; he even thinks it worth inquiry whether it really repels the white ant, which seems to be a Himalayan notion.

Moorcroft—and there never was a more trustworthy reporter—in the first volume of his travels, makes use of the following language. "The most valuable tree of Kashmere is, however, the Deodar, a variety of Cedar, the timber of which is extensively employed in the construction of houses, temples, and bridges." And he adds, that pieces of it had been found little decayed, although exposed to the action of water for 400 years.

We have, moreover, the high authority of Dr. Boyle, who long resided in the Deodar countries, that the timber is of excellent quality, and of great strength as well as durability. It is universally employed in the building of temples, in which none but the best materials would be employed. The mode of using it is to construct a solid frame work of the timber, and then to fill in the spaces between with stones, so that the main strength of the building is made to depend upon the Deodar, rather than the masonry. Thus used, it is exposed to a trial which nothing but timber of the best quality could support. This is in complete accordance with all that we have ever heard of the quality of Deodar wood; and must be regarded as conclusive.

The only subject of doubt in our minds as to the issue of the great undertaking now described is whether the gentleman to whom the young Deodars will be finally intrusted, after they shall have been delivered up to Government by the nurserymen who are to rear them, will know either where, or when, or how they ought to be planted.—[Gardeners' Chronicle.]

Osier or Basket Willow.

As considerable attention has lately been directed in the United States, to the cultivation of the Basket Willow, we copy the following short article respecting its culture, and management in England, from a late number of the London Gardener's Chronicle.

More than twenty varieties are alluded to, but the most profitable, we believe, is considered to be the *Salix viminalis* *Lin.*, which is valued especially for its ample produce of very long, strait, slender, tough and flexible branches, and when allowed to grow, forms a tree from ten to twenty feet in height. It has leaves, linear or lanceolate, obscurely crenate, white and silky beneath; stipules very small, sub-lanceolate, ovaries almost sessile. Flowers in April or May, before the leaves come out.

OSIERS are adapted to low wet patches of ground, where scarcely any other crop can be adventured. They are largely grown in Holland, in Spain, and some other countries of Europe; and in England, are perhaps most plentiful in the flat portion of Lancashire, where grounds of 60 or 70 acres each are not unusual, and are found also in the Great Level of the Fens. The land must be so situated that water cannot stand upon the surface for more than a few days at a time in summer; in winter, two or three months' flooding will be no disadvantage. Parallel grips or water-trenches should be dug about three feet apart; the earth thrown out raises the soil and improves the drainage. Sets about two feet long, are then planted by being thrust half-way into the

ground, in rows, and about eighteen inches equal distances from each other, the trenches occupying spaces between every other pair of rows. The sets are to be purchased from old Osier-grounds, at the rate of 10s. per 1000, and about 12,000 are required to plant one acre. Great care should be taken to procure valuable sorts, as there are more than twenty different varieties of Osier, and these are also of varying quality. Several kinds may be grown upon the same ground. The stems must be left for two years to strengthen, and in the third autumn the Osiers may be cut. The cutting then comes annually, the flexible shoots being commonly from six to eight feet long. The only management the land requires is the chopping down and clearance of weeds once a year. If sold "green," the crops may either be disposed of by the acre or by the bunch. The Osiers, when cut, are tightly tied up in bundles, with an "ell-band," the bundles measuring 42 inches round at the distance of one foot from their thick end; and these bunches are commonly sold for 10d. or 1s. each. Osier-grounds have been known to produce a crop of 300 bunches per acre, which would amount in value to 12£. or 15£.; but a good yield may be reckoned worth 5£. or 6£. per acre, and an inferior quality often diminishes the return to less than half this sum. The main expense is the cost of the land; the cutting, &c., amount to but a trifling sum. Extensive growers do not generally sell their Osiers "green," but prepare and send them to market "white." The process consisting in setting up the Osiers immediately after cutting, with their thick ends a few inches deep in water—letting them remain until the sap ascends freely—and then peeling off the bark with an instrument for the purpose. They are then dried and sold by the ton weight.

Strawberries.

73 Varieties, by William R. Prince, Flushing, N. Y.

[Continued from last number of Farm Journal.]

30. *Abyssinian Prince*.—One of Dr. Brinckle's seedlings, of medium size, conical form, and dark crimson color, productive. P.

31. *Melven Scarlet*, or *Victoria*.—Very large, roundish depressed, dark scarlet, showy, coarse, very productive, profitable for market. P.

32. *Hudson*.—This ancient and very distinct variety is identical with the "*Hudson of Cincinnati*." The fruit is of large size, pointed conical form, dark scarlet or crimson when fully ripe, and is then of excellent flavor. The berries redden some days before maturity, and are in consequence often plucked prematurely, and the fruit from this circumstance has been deemed inferior in sweetness and quality. The berries have the peculiarity of remaining green at the extreme point until they attain perfect maturity, when that becomes red also. This is one of the few varieties of which we possess plants of both sexes, and they have been grown jointly at these nurseries for more than forty years. It appears that at Philadelphia they possessed only the pistillate variety, and that it alone was transmitted to Cincinnati many years since, which serves to account for all the Ohio plants being of that sex. It is highly productive, and perhaps none other will yield a larger crop, but it is indispensable that its own male, or some other, should be connected as fertilizer. It is entirely distinct from the "*Hudson's Bay*," of the London Horticultural Society, which is one of the *Scarlets*, whereas this is of the *Pine* family. In my investigations I have found it to be identical with a variety called

"*Mulberry*," and it may be identical with the variety so named in the Catalogue of the London Horticultural Society. About thirty-five years ago it was generally called "*Red Chili*," and I think it was imported from England by my father, the late WILLIAM PRINCE, under that name, but he finding it distinct from the *Chili* family, changed that name to the present one. u and r.

33. *Burr's New Pine*.—Medium size, light scarlet, handsome, high, spicy flavor, not a full bearer, and the plant less vigorous than many other varieties. P.

34. *Burr's Scarlet Melting*.—Rather large, rounded or short cone, scarlet showy, moderate flavor, rather soft for market, ripens early, very productive, the most valuable of Burr's varieties. P.

35. *Rival Hudson* (Burr's).—Rather large, conical, dark scarlet, showy, medium quality, acid, good for preserves, very productive. P.

36. *Columbus* (Burr's).—Large, dark scarlet, inferior flavor, very productive. P.

The four preceding varieties were originated by Mr. JOHN BURR, of Columbus, Ohio.

*37. *Serena*.—Rather large, light scarlet, fine flavor, productive.

38. *Iowa*.—Large, broad rounded, light orange scarlet, peculiar color, beautiful, early, productive, inferior flavor, but merits culture for its other qualities. It is one of a distinct family or species, natives of our western prairies.

39. *Jenney's Seedling*.—Large, rounded or obvate, crimson, too acid until fully ripe, then of good flavor, very productive. It has been much overrated, when there are so many others preferable to it. P.

40. *Lizzie Randolph*.—A seedling originated by Dr. BRINCKLE, of Philadelphia; the fruit round, averaging larger than *Hovey's Seedling*, but inferior to that in flavor, very productive, a showy fruit of little value. P.

41. *Genesec*.—Rather large, with a neck, bright crimson, showy, moderate flavor, fruit on long stems, productive, growth vigorous.

42. *Monroe Scarlet*.—Large, roundish, light scarlet, good flavor, very productive, estimable. P.

43. *Climax Scarlet*.—Medium size, conical, light scarlet, good flavor, rather acid. P.

44. *Orange Prolific*.—Large, rounded, orange, scarlet, rather acid, very productive, late. P.

45. *Scarlet Conc*.—Rather large, conical, bright scarlet, productive.

The five preceding varieties were originated by Messrs. ELWANGER & BARRY, of Rochester.

46. *McAroy's Superior*.—Of vigorous growth, fruit very large, rounded, dark crimson, juicy, very good flavor, fine color, very productive. P.

47. *McAroy's Pistillate, No. 1*.—A seedling from the *Iowa*, and bears much affinity to its parent in color and size; large, bright scarlet, very handsome, productive, but not highly flavored. P.

48. *McAroy's Extra Red*.—Large, beautiful, productive, moderate flavor and medium quality. P.

49. *Schneicke's Hermaphrodite*, or *Longworth's Prolific*.—Fair size, rounded, scarlet, sweet, very fine flavor, productive, of vigorous growth.

50. *Schneicke's Pistillate*.—Large, rounded, crimson, very juicy and good, but not equal to *McAroy's Superior*. P.

51. *Moyamensing Pine*.—Secondary size, conical, crimson, juicy, not sweet, and but little flavor, strong fruit stems, ripens gradually, very productive. It is of vigorous growth, and assimilates greatly to the old *Hudson*, of which it is doubtless a seedling. P.

52. *Walker's Seedling*.—Fair size, dark red, fine flavor; productive. P.

53. *California Pine*.—Moderate size, scarlet, same form and flavor as the old *Hudson*, productive. P.

54. *Mexican Alpine*.—Found by the writer on one of the loftiest volcanic mountains of Mexico; foliage resembles the Alpine varieties of Europe, and very distinct from all other. American species, fruit scarlet, and of moderate size.

*55. *Amanda*.—Short conical, light scarlet, juicy, good flavor, productive. P.

*56. *Heroine*.—Good size, light scarlet, conical, fine flavor, productive. P.

*57. *Psyche*.—Large, conical, scarlet, beautiful, excellent flavor, very productive. P.

*58. *Troubadour*.—Large, elongated cone, crimson, good flavor, productive. P.

*59. *Victorine*.—Large, scarlet, fine flavor, very productive, late flowering, estimable. P.

*60. *Imperial Scarlet*.—Large, light scarlet, excellent flavor, and will probably prove one of the most estimable. It fruited for the second time the past summer. P.

*61. *Prince's Climax*.—A very hardy and robust variety, surpassing almost every other in the vigor of its growth and its large foliage. The fruit is borne on strong stems, and excels all others in average size without any small berries. It is of the most beautiful light scarlet color, and the best suited of the varieties for a splendid market fruit. The flavor is very pleasant, but not equal to *Le Baron* and other highest flavored varieties. It is a pistillate, and exceedingly productive, and presents the most admirable display of fruit we have ever beheld. P.

62. *Large Early Scarlet*, or *Early Virginia*, is so well known that it may seem unnecessary to describe it. The fruit is of secondary size, light scarlet, and of pleasant flavor, and it produces one-third to one-half of a full crop. It has served very generally as a fertilizer, resulting oftener from circumstance than from choice. Its blossoms expand too early for impregnation of the numerous later varieties, and on this account "*Le Baron*," is much preferable as well as for its larger and finer fruit and the abundance of its crops, and for an early flowering fertilizer the "*Triumph*" is much to be preferred.

63. *Bieton Pine*.—Large, white tinged with pink, good flavor, moderate bearer, only valuable for its color.

64. *British Queen*.—A very large and splendid fruit, and of fine flavor, but utterly worthless for its unproductiveness in our climate, unless great pains are taken in its culture. A bushel may be grown from other varieties more easily than a quarter from this. A pistillate variety from this one would be very valuable, as its sexuality would remedy the barrenness of the parent.

65. *Princess Royal*.—Large, dark scarlet, conical, good flavor, ripens late, poor bearer.

66. *Elton Pine*.—A large and splendid fruit, fine flavor, ripens late, a poor bearer; but this and the preceding will produce some admirable fruit, if especial pains are given to strengthen the soil, and to detach all the runners.

67 to 71. *Myatt's Black Rock*, *Eleanor*, *Globe*, *Mammoth* and *Prolific*, are English Hermaphrodite varieties, mostly of good flavor, but poor bearers in our climate, and their foliage is very subject to be burnt by our powerful sun. The *Mammoth*, though large, is of miserable flavor.

72. *Goliath* (Kitley's).—It has been much lauded, but is now denounced in English publication as "a shy bearer and insipid in flavor."

73. *Hautbois*.—This ancient European species is remarkable for the musk flavor of its fruit, and for the barrenness of its seminal varieties. The *Prolific* and *Large Flat Hautbois* produce tolerable crops. The *Green Hautbois* is more an object of curiosity.

The light English hermaphrodite varieties from No. 63 to 71, commencing with the *Bieton Pine*, I do not think worthy of culture, except by such fancy amateurs as are willing to waste much time and culture for small returns. Very many persons have never seen a full crop of strawberries as produced by pistillate plants, and therefore think much of a partial one. They should cultivate some of the pistillates noted as "very productive," and then decide understandingly. I have passed over the *English Wood* and *Alpine Strawberries*, as they are so well known to every cultivator.

The following varieties are of little comparative value on account of their unproductiveness, or of the inferior quality of their fruit, and have consequently been superseded, as well as forty other varieties as published in our catalogues:

Aberdeen Bee-hive; Alice Maud, (Princess;) Black Prince;* Buist's Prize; Burr's Seedling; Burr's Late Prolific; Burr's Mammoth; Burr's Profusion; Burr's Scioto; Crement Perpetual; Cushing; Downton; Duke of Kent; Dundee, (synonym;) Fay's Seedling; French Cucumber; Keen's Seedling; Knevett's Pine; Lord Spencer; Myatt's Eliza; Myatt's Deptford Pine; Necked Pine, (Ohio;) Old Pine; Prince Albert; Prince of Orleans; Richardson's Early; Richardson's Late; Richardson's Cambridge; Roseberry; Royal Pine; Royal Scarlet; Swainstone; Willey, or Willey's Seedling.

A SMALL SELECT ASSORTMENT.—When considering the characters of so great a number of varieties, each of which is valuable for some property or other, and all of which constitute a selection from the mass that have for years been passing in review, it is difficult to designate so small a number as six varieties that shall combine all we desire. However, I will venture so far as to select six for market, and six for a family garden, such as I would prefer, if confined absolutely to that small number:

Six varieties for market.—1. *Le Baron*—productiveness, and excellent flavor. 2. *McAroy's Superior*—productiveness, beauty and flavor. 3. *Cornucopia*—productiveness, beauty and flavor. 4. *Triumph*.—Earliness, beauty and productiveness. 5. *Hovey's Seedling*—great size and productiveness. 6. *Primate*—productiveness, beauty and firmness.

Six varieties for a family garden.—No. 1, 2 and 3 of the preceding list. 4. *Superlative*—productiveness, flavor and color. 5. *Coronation*—size, beauty and flavor. 6. *Sylphide*—size, beauty and flavor.

I have purposely omitted *Prince's Climax* and the *Imperial Scarlet*, as they are not procurable, not having yet been offered for sale.—[Horticulturist.

Peach Worm.

This great enemy to Peach growing, after destroying whole orchards, which would otherwise be long lived and profitable, is fortunately within our control. His operations commence at or just below the surface of the ground, as may easily be detected by the presence of gum. All that is necessary is, to bare the neck or collar of the tree, in the

*The Black Prince, although it has been extolled, is nevertheless a shy bearer, often insipid in flavor, makes but few runners, and is subject to die out.

fall, leaving the place where the roots start out, exposed through the winter. In the spring, fill in around each tree, half peck of air slacked lime, or wood ashes, and if the earth is heaped up on it a few inches, so much the better. In the fall again this should be spread around the tree and the roots bared as before. Lime and Potash are both a specific manure for the peach tree, giving it increased vigor and productiveness, and its leaves a fine, healthy deep green color. We have known the worm to be destroyed by this treatment, but where he has already made an entrance, he had better be first ferreted out with the knife and destroyed. The lime assists in the healing of the bark. This method answers most effectual as a preventive.

For large sized trees, the quantity of lime of ashes should be increased to a peck or more.

Michigan Double Plough.

MR EDITOR:—Your readers have no doubt heard of the Michigau Double Plough, and some of them may be glad to know more of its peculiar form and advantages.

It consists of two ploughs on the same beam, about ten inches apart. The forward plough takes a furrow of three or four inches in depth, and lays its slice exactly *bottom upwards* into the previous furrow. The after plough follows *instantly*, cutting six or eight inches deeper, and throwing the subsoil over the advancing furrow slice in as loose and mellow a condition as could be desired for planting. The *toughest sward ground, by once ploughing* with this plough, is made to look like an old field ploughed and harrowed. Twice ploughing with the common plough would not do as well. The working of the double plough at agricultural fairs in Massachusetts, has taken farmers by surprise. The half, they say, was not told them. Spectators and Committees have gone away filled with admiration, and for proof of this we need only refer to the numerous agricultural reports that have been published within the last year or two. The writer of the Essex county Report says:

"I determined to give the double ploughs such a trial as to satisfy *myself* at least, of their value. Accordingly I wrote to Mr. Prouty, the proprietor, and manufacturer of this plough, to send me two of the best structure, which he did; they were tried in every form thought desirable to test merits. The result was, that each and all expressed their opinion, that the plough was a decided improvement on any ploughs they had ever seen, and that it would be found of great value for many purposes on the farm."

In the Plymouth county report is the following:—"Rarely is seen work more thoroughly and expeditiously done. This plough may be commended to the notice of all those farmers, who are desirous of pulverising their soil thoroughly in the least time." The Hampshire Agricultural society say—"For turning in of grass lands and stubble, this implement is considered one of the most important that has come to notice." The Berkshire Society say: "The plough that attracted the most notice was the Michigan sod and subsoil (or double) plough, held by Dr. Reed, of Pittsfield."

Any number of such testimonials may be gathered from the agricultural documents of last year.

The following statements may be considered as

high authority. They are from the pen of Calvin Hatch, Esq., of Farmington, Ct.

One year since, I obtained one of the Michigan Double Ploughs, manufactured by Messrs. Prouty & Mears, of Boston, and used it for breaking up about six acres for corn ground, which I expected to plough more than once and harrow, to get it in a state suitable for planting; but after seeing the work so admirably done, concluded I could have it in no better state for planting, and proceeded to plant without further preparation. I never had better hoeing on sward ground, for the sward was so covered it lay quite clean. Many have admired the work done by this plough, and some have used it, and many have been lookers on when it has been in use. Mine obtained the first premium at the last plowing match of the Union Agricultural Society."

The question has been asked, "Can you plough and harrow at once?" In reference to this question an English paper remarks:

"If we could have a plough so made that it would, in the act of inverting the furrow, slice, break it into pieces, and pass over the bottom of the furrow without the friction of any smooth surface of iron or other material being drawn over, closing up all the pores and fissures in the under strata, I think there is little doubt but such a plough's cultivation would approach (when performed at equal depths) fork or spade cultivation."

I think, Mr. Editor, this extract and more with it, appeared in your own paper. Our friend over the water never saw the Michigan Double Plough, or he would have said—"This is the very implement we were looking for—it inverts and pulverises just as we had conceived it possible for the thing to be done—it realizes in the most complete sense the idea of *ploughing and harrowing at once*."

Farmers have a deep interest in acquainting themselves with this plough. No man wishes to plough his land twice, and harrow it besides, when *once ploughing* with the double plough would be equally as good. The facts submitted in this article may stimulate inquiry, and lead to a trial of this most important implement by the farmers of Maine. It should be noted that David Prouty & Co., North Market street, Boston, are the only manufacturers of the genuine Michigan Double Plough for New England.—[Maine Farmer.

MASSACHUSETTS.

Boston, April 15th, 1853.

Trial of Reaping Machines.

The following notice was received after the form in last number of Farm Journal was made up, and too late for insertion. For convenience of publication, it is necessary to have our matter arranged not later than the 20th of each month, and we should be obliged if our friends, who have communications or minutes of meetings interesting to the farmers of the State, would forward us official copies as early as possible, so as to procure their insertion in the current number. The trial of reaping machines, about to be held, is worthy of special attention from manufacturers and agents. The difficulty felt at annual exhibitions, in deciding upon the merits of machines, impossible to test practically at the time, will be obviated by the exhibition now proposed. There will

no doubt be a large concourse of farmers present, and the occasion will be one of great interest.

The high price, and absolute scarcity of farm labor at times when work must be performed, if at all, is gradually increasing the *necessity* for agricultural machinery, and its introduction is a benefit all around. Much of our farm work is slovenly done, for want of a sufficient amount of labor being concentrated upon it, which can only be remedied by the use of good labor saving implements. Thrashing and drilling machines, hay and straw cutters, horse power churns, &c., only introduced generally within a few years, are now considered indispensable, and reaping and mowing machines, of approved construction and working, are also much wanted.

IMPORTANT TO FARMERS.—Agreeably to previous invitation, a meeting of Farmers was held at the Black Bear Hotel, Philadelphia, on Saturday, the 9th of April, 1853, for the purpose of taking into consideration the propriety of holding an Exhibition and trial of mowing and reaping machines the present summer. The meeting was organized by appointing Alan W. Corson, of Montgomery county, Chairman, and Thomas Pratt, of Delaware, Secretary.

Philadelphia, Montgomery, Chester and Delaware counties, were represented in the meeting, by the appearance of a delegation from each county, who were unanimous in favor of such an exhibition, which was ordered to be held at Flowertown, in Montgomery county, on July the 7th, upon the property of Dr. McCrea, who has very kindly offered his farm for that purpose.

Isaac Newton, Hon. Sketchly Morton, Jos. Crawford, Isaac Pearson and Alan W. Corson, were appointed a committee to invite manufacturers and others to attend the exhibition with their machines.

Editors are requested to give notice of said exhibition.

Adjourned to meet on the 7th of July, at Silver's Hotel, in Flowertown, at 10 o'clock, A. M.

By order of the meeting.

A. W. CORSON, Chairman.

T. PRATT, Secretary.

Chester County Agricultural Society.

A meeting of Farmers was held on the 25th ult., at the Horticultural Hall, West Chester, with a view to re-organize an Agricultural Society in this county.

John Parker, Esq., was called to the Chair, Jacob Massey and John Baldwin were appointed Vice Presidents, and James Pierce and Alexander Marshall Secretaries. The meeting was addressed by Dr. Walker and John S. Bowen, Esq.

On motion, Dr. Isaac Walker, John S. Bowen, and Alban Webb, were appointed a committee to prepare and report a Constitution for the Society, who, after a short interval, reported a Constitution, which was adopted.

A committee was appointed to report permanent officers to an adjourned meeting, to be held in the Borough of West Chester, at the time of the approaching Horticultural and Industrial Exhibition, on the 18th of June.

The ball is now fairly started, and Chester county will soon be up with the times, and with her sister counties in this respect. The question has been often asked why Chester county, proverbial for its improved stock, and highly cultivated farms, should be without an organization of this kind. It may be replied, that some ten or twelve years ago, and in advance of much movement on the subject in any other county of the State, a Society was established here, and held several large and flourishing exhibitions. The commercial revulsions and depression of prices of stock and farm produce, about that period, caused it to decline, and the funds on hand were passed over to the Chester county Horticultural Society. This is now and has been since, in active and flourishing operation, but an Agricultural society seems also required, to keep pace with the present progress of improvement. County Associations of this kind have been useful through the State, in bringing farmers together, awakening enquiry, and extending a knowledge of improvements in stock, farm implements and productions.

To Prevent the Potato Rot.

WESTERN SARATOGA P. O., Union co., Ill., April 4, 1853.

Permit me, through your paper, to make known to the farming part of the community a perfect cure and preventive of the *Potato Rot*, having tested it thoroughly four years, with perfect success; while others in the same field, who did not use the preventive, lost their entire crop by the rot. It not only prevents the rot, but restores the potato to its primitive vigor, and the product is not only sound, but *double* the size, consequently producing twice the quantity on the same ground, and the vines grow much larger, and retain their freshness and vitality until the frost kills them. Aside from the cure of the *rot*, the farmers would be more than doubly compensated for their trouble and expense in the *increase* and *quality* of the crop. It being of such vast importance for the farming part of the community to know the secret of the preventive in time to save the coming crop of potatoes, I hasten its publication, in order to give them a chance to try it, if they see proper, the present season, trusting entirely to the public gratitude to reward me, as they may see proper, at their next Annual Fair, for the discovery, after they have tested the merits of the preventive.—The remedy or preventive of the *potato rot* is as follows: Take one peck of fine *salt* and mix it thoroughly with half a bushel of *Nora Scotia plaster* or *gypsum*, (the plaster is the best,) and immediately after hoeing the potatoes the second time, or just as the young potato begins to set, sprinkle on the main vines next to the ground, a table-spoonful of the above mixture to each hill, and be sure to get it on the main vines, as it is found that the *rot* proceeds from a sting of an insect in the vine, and the mixture coming in contact with the vine, *kills* the effect of it, before it reaches the potato. Farmers would do well to try it, as they would be well paid for their trouble by the increase of their crop as well as the quality of the potato. *Try it and see*. I could, if necessary, furnish ample certificates to substantiate the above, but deem it unnecessary, as it needs only a trial to prove it.—[N. Y. Tribune.

H. PENoyer.

Potatoes.

For the Farm Journal.

ESTHERTON, April 4, '53.

MESSRS. EDITORS:—

As the time for planting potatoes is approaching, I send you the result of a careful experiment made with different manures, with the remark that I shall make a similar trial this Spring, and trust that some of my brother farmers may do the same on limestone, slate and gravelly soils.

On the 19th of May last, I selected 126 Mercer Potatoes, without care, as nearly the same size as possible, weighing about three to the pound—cut each potato into two pieces lengthwise, and planted them in my garden, in rich sand loam soil, in hills two and a half feet apart, three pieces in each hill, and attended to them myself.

No. 1. Twelve hills, three pieces in each hill, Kentish's Artificial Guano, manufactured in New York, two ounces to the hill, covered one inch with ground before applying the guano. One inch on top of Guano.

No. 2. Twelve hills, three pieces to each hill, Saline or Chemical Fertilizer, manufactured in Philadelphia, covered as No. 1.

No. 3. Twelve hills, three pieces to each hill, Potatoes first rolled in Plaster, covered one inch with soil, two ounces plaster then applied, and again covered with one inch of earth.

No. 4. Same number potatoes and hills as former; applied two ounces of air-slacked Lime, and covered as No. 1.

No. 5. Same as former; well rotted short barn-yard manure on the potatoes, and covered two inches with earth.

No. 6. Same as former; short barn-yard manure under potatoes, covered two inches with earth.

No. 7. Same as last; covered one inch with earth, applied two ounces Peruvian Guano, and covered with another inch of earth.

On the 23d September, I raised them, and carefully weighed the product of each twelve hills.

No. 1. Kentish Guano; weighed 44 pounds.

No. 2. Saline Fertilizer; weighed 56½ pounds; clean smooth skin.

No. 3. Plaster; weighed 42½ pounds.

No. 4. Lime; weighed 41 pounds, found one rotten potato, and skin of all rough.

No. 5. Barn-yard manure on top; weighed 34 lbs., one-fifth of all nibbled by mice and moles. I think seed was partly eaten.

No. 6. Manure below; weighed 44½ lbs., also eaten, but not so much as No. 5.

No. 7. Peruvian Guano; weighed 67½ lbs., even in size, smooth skin, free from excrescences.

I have before tried Peruvian Guano on Wheat, Corn and Oats. On the Oats there was a marked benefit, the growth was taller and the color a darker

green. The spots where it had been sown, could be observed at the distance of one hundred yards. On the Wheat and Corn I could perceive no difference.

A. O. HIESTER.

The above was sent us for publication some months since, but having been lost or mislaid, we now copy it from the Pennsylvania Telegraph. Judge Hiestler is one of our best practical farmers, and the results of his interesting experiment are well worth the attention of the reader, as showing the comparative merits of the different manures.

It will be seen that the Peruvian Guano takes the precedence of all the other fertilizers, when applied in the same quantity. But when it is remembered that the Chemical Fertilizer, the yield from which was but a few pounds less than the Guano, cost but a little more than one-third the price of Guano, it becomes apparent that it is by far the most valuable of the results of Judge Hiestler's experiment, and may be taken as a safer general criterion.

Profitable Sow.

For the Farm Journal.

EDITORS OF THE FARM JOURNAL: Dear Sirs:—In January 1852, I purchased a sow, which has shown herself somewhat remarkable in point of fecundity, and withal has been rather profitable. If you think an account of her last year's doings worthy a place in your valuable Journal, I will give it to you.

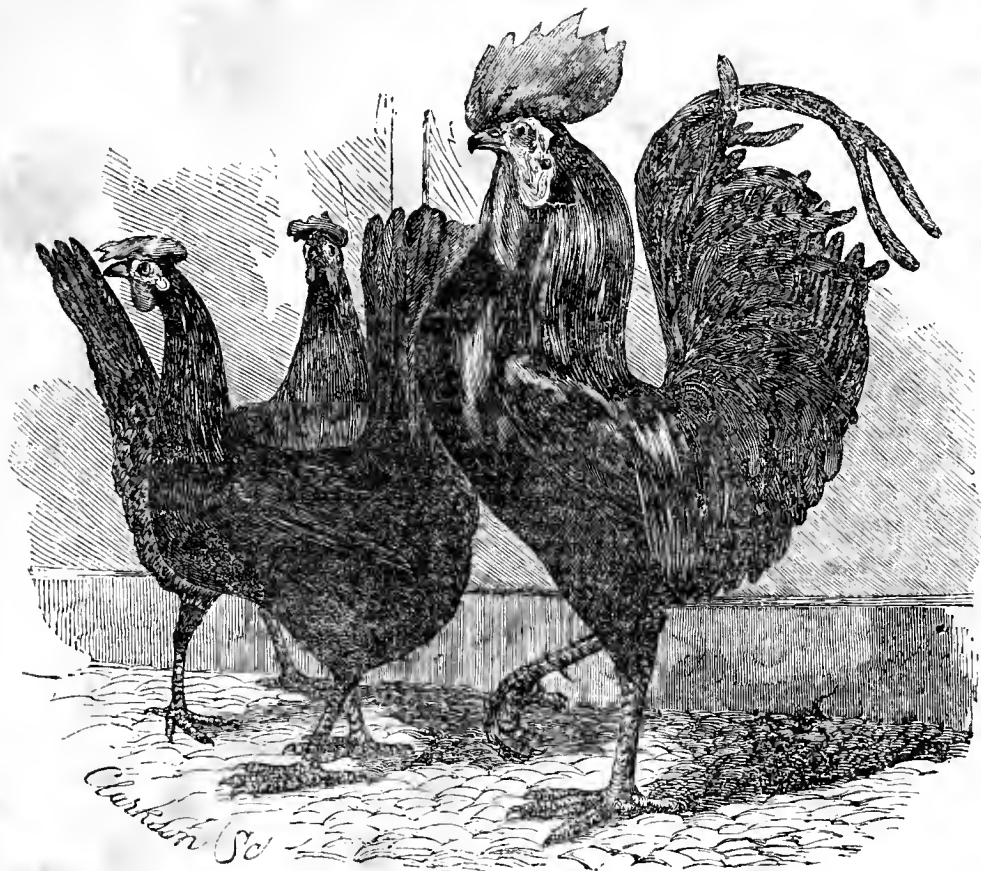
I bought her in January for \$15. Second of February she became the mother of fifteen pigs, of which she saved thirteen, two being overlaid. One of the thirteen died when about three months old, from eating too much buttermilk. On June 18th, she brought forth fifteen more young grunners, of which she kept twelve; one of which I gave away, and sold another for \$1 50. On November 23d, she had fifteen more, fourteen of which lived; two I sold for \$1 25 a piece, one was killed for a roast, and eleven still exist.

The first litter, in September averaged 120 lbs. of pork, each at 7½ cents, or \$108. The second, on December 1st, averaged 75 lb., at 7½ cents, or \$55 80. The third I value now at \$5 each, making with those sold, \$57 50. The old lady, if she should not happen to die, promises to produce another lot, I know not how many. The principal food of these hogs, has been the milk from a dairy of twenty cows, with some corn to fatten.

I have been offered double what I gave for the sow, and allowing her to be worth that, it will make for the whole lot, \$251 30. Deducting \$15, the first cost of the sow, and \$75 for corn, which is more than they consumed, it will leave \$161 30. A tolerable fair profit for one year, from one sow.

E. V. D.

Oxford, April 15th, 1853.



Black Spanish Fowls.

The above original and spirited engraving of Black Spanish Fowls, belonging to Wm. C. Rudman, Esq., Philadelphia, was executed by Edward Clarkson, who, by the way, is earning quite a reputation in this line, for his *faithful* and truly *natural* portraits of animals.

These fowls are beautiful specimens of a breed, not yet much known, but highly valued wherever introduced, for great laying qualities, combined with very tender flesh. Their eggs are white and unusually large, nearly equal to the Shanghai, and where these are the chief object, it is highly probable that this is *the Breed*. They are also well adapted for capons. The color of this breed is uniformly black, when the stock is pure. The combs of both male and female are large and of a brilliant scarlet color, the hens' drooping to one side, while that of the male is erect and deeply serrated. A singular feature of this fowl is a white spot on each side of the face,—and to this particular mark “the fancy” set the value. In England, among many of the poultry fanciers, these fowls take rank with the Shanghais, and are in great demand at very high prices. We have seen the cross of this breed, with both the Shan-

ghai and Dorking, and they are considered very profitable either for the farm or the table.

Our friend Rudman will have a fine opportunity to test the respective merits of his breeds of Poultry, and we hope to hear from him upon the subject through the columns of the Farm Journal.

Fine Poultry.

William C. Rudman, we perceive, holds some of his fine stock of poultry for sale. The *purity* of this stock can be relied upon, and those in want of such will do well to look after it. See his advertisement.

Address by William S. King.

Before the New Hampshire Agricultural Society.

We are indebted to the author, one of the able editors of the Journal of Agriculture, for a copy of the above address, from which we shall take pleasure in making a few extracts for another number of the Farm Journal. It opens out to the sun light, some of the prejudices of the day, which have done so much to *retard* the progress of agricultural improvement, better than any thing we have seen lately.

Correspondents for the Farm Journal.

We believe that in Pennsylvania are as good Farms and Farmers, as valuable improved stock, some of the very best agricultural implements, as successful combinations of science and practice in cultivation, as can be found in any other State in the Union, but there seems to exist a most unaccountable reluctance to *extend and promulgate* through the medium of the press, their experience and information, for the benefit of their brother farmers. Compared with New York and New England, the contrast is most striking. *There*, a farmer who practises a successful system or rotation, raises an extraordinary crop, or by judicious and skillful crossing, improves his stock, considers it a kind of *duty* to promulgate it through an agricultural paper for the general benefit. It is not so here, but *it ought to be*. It should be considered one, and that not the least of the duties owing to society, not to hide our light under a bushel, but to contribute our mite, whether small or large, to the aggregate good. We hope to make the Farm Journal the medium, through which intelligence and information on all agricultural matters in Pennsylvania, is to be distributed. It is the only strictly Agricultural and Horticultural periodical in the State, and its pages are at the service of all, willing and disposed to contribute information. They can be filled, if our farmers so wish it, with choice and select valuable and practical matter for other States and countries, accompanied with such editorial remarks and suggestions, as we consider applicable to our own section, but we greatly prefer original communications from Pennsylvania Farmers. We do not care for high flown sentiment, and well turned periods, and merely theoretical abstractions. What we want are *facts, experiments, results*; plain facts, plainly given. These are really valuable to us and our Journal, and we can but consider it the *duty* of the Farmers in this State, to cultivate more the *habit* of disseminating their agricultural knowledge and experience, by writing for the papers. We will welcome their contributions with pleasure, and in this way more than any other, can the Farm Journal be made creditable to, and worthy of Pennsylvania. We are disposed to do all we can, but no editor or dozen editors, can do what can only be done by practical farmers themselves, variously situated, as regards soil, climate, or other circumstances.

Since the Journal has come into our hands, our list of subscribers has been receiving constant accessions. Within three or four weeks we have had an increase of nearly two hundred new ones, from the State of Delaware alone, which shows it is being appreciated in that quarter, and that her farmers are awake to the spirit of improvement. This always creates a demand for agricultural reading, as it is also a necessary result of it.

We want 10,000 subscribers in Pennsylvania du-

ring the present, and before the commencement of the next volume. With thanks to friends in various sections of the State, who have forwarded us clubs, we hope they will not relax their efforts.

The Strawberry Question.

We have received from Thomas Meehan, Philadelphia, a letter in reference to the criticism by W. R. Prince, in our last number, on his essay, read before the Pennsylvania Horticultural Society. The letter was accompanied with a specimen of a strawberry plant, "McAvoy's red," with *two scapes from one root*, having *one* pistillate, and *the other* staminate, blossoms, each of them what would be called well developed. We have something to say on this hackneyed subject ourselves, but shall await another time, till the paper bullets, we hear are in preparation are discharged. We observe T. Meehan's essay has made quite a stir among our friends, the Cincinnatians who have gone into regular conclave on it, and passed a formal resolution, after long discussion, "that this Society hold that experience has only confirmed their previously established opinions as to the permanent character of a pistillate strawberry, as given to *the world* in their report of 1846." There is a sensitiveness in the "Queen city" about this "strawberry question" so long a mooted one. We shall say no more *now*, than to express the opinion, that notwithstanding the above resolution, the strawberries will continue to blossom as they ever have done. More anon.

Agricultural College.

The New York Legislature, the day before its adjournment, passed the bill incorporating the New York State Agricultural College. The plan of instruction embraces practical and scientific agriculture, chemistry, mechanics, mathematics, surveying, engineering, geology, botany, the practical management of the farm, of the dairy, and farm stock.

We clip the above from one of our exchanges. An act something similar, embracing a plan of an Agricultural College for Pennsylvania, was before our Legislature, but we cannot learn that it passed into a law, or by what species of manœuvring it was omitted. Perhaps some of our readers can inform us. The farmers of the State, and indeed the whole people are interested, and it is their due that the *particulars* should be known, who voted for or against it, or who failed to call it up. There seems to be less difficulty in *appropriating* the money of the people, than in passing laws of this character, calculated to increase the *means* of paying, and which tend directly to the general benefit, and are actually required by the example of States north and south of us. We hope it will still be persevered in at the next Session.

Calystegia Pubescens.

Under the title of "the new and charming Chinese Climber," the above plant has been very largely distributed, from certain sections, and a pretty round speculation has been made out of it. We know of places in Pennsylvania, where it was received through the mail first, at the *very moderate price* of fifty cents per tuber, and afterwards as it was found *easy of propagation*, it was sent as *presents*, to induce purchases of other articles.

In the November No. of the Farm Journal, we wrote an editorial about this weed, cautioning the public, and advising all traces of it to be carefully hunted out, emptied on the brush heap, and *burned*. We refer to it again now, as a friend of ours and a careful farmer, informs us it has spread through his ground in a most alarming manner, and would appear to be worse than daisy or even Canada thistle. He has found it two feet under ground, and thousands, in every direction, all growing in a short time from one or two plants. *Calystegia* belongs to convolvulacea, and like *convolvulus arvensis*, that pest of English farming, is especially to be dreaded. Let no time be lost in its extirpation.

Analysis of Professor Mapes' Superphosphate of Lime.

We observe an analysis of this article has been made by Professor Johnson, of Yale College, who says it is composed of

37 lbs. plaster, (sulphate of lime.)

21 lbs. insoluble phosphate.

15 lbs. superphosphate of lime.

5 lbs. free sulphuric acid.

2½ lbs. ammonia.

The other twenty pounds are water, sand, &c.

Northumberland County.

A friend at Turbotville, Northumberland county, in sending us a list of new subscribers, winds up his interesting epistle in the following strain:

"We, in this county, may justly boast of possessing one of the best and most beautiful portions of the earth. Our limestone township is (not inappropriately) denominated Paradise. And we have good old Adam and Eve* still living in it. I do not mean that patriarchal pair who lived in the garden of Eden; but a venerable couple of about three score and ten, who are surrounded by a numerous progeny which, like themselves, seem to enjoy to their hearts content the bounties of Divine Providence. We have a healthful climate, a superior soil, a profusion of limestone, and an enterprising population. Nothing seems wanting but to reduce Agriculture to a science, and to enlighten the community therewith, in order to make us prosperous and happy."

*Adam E. and his wife Eve, who have resided for forty years near his village.

Sale of Durham Stock.

Col. Sherwood's sale of about thirty thorough bred short-horned cattle, twenty of them cows and heifers, the remainder young bulls, will take place at Auburn, New York, on the 8th of June, at one o'clock, P. M. These animals have been bred with care from the best blood in England, and are well worthy of attention. Several of them are from "Yorkshire-man," imported by Joseph Cope, Chester county, Pa.

The State Fair.

Our State Agricultural Exhibition and Cattle Show which is to be held in Pittsburg on the 27th, 28th, 29th and 30th days of September next, should not be lost sight of by the farmers, horticulturists, mechanics, manufactures and artisans of Pennsylvania. The time is already at hand when exhibitors should be making those preparations which they cannot in justice to themselves dispense with, prior to bringing before the public gaze those articles and animals which they wish to enter in competition with the many competitors on occasions of this kind.—There is, however, plenty of time yet left to enable every one who wishes to get up *something* for the fair. The premium list which is very extensive and which offers more and higher premiums than was offered by the Society last year will soon be ready for publication.

Premiums will be offered to competitors without the State, and encouragement given by handsome rewards for prize articles in all branches of industry, with the hope that they may be all represented.

I desire to say to the farmers and others of the western counties of the State, to not hesitate making preparations for competing at this exhibition *because* it is to be held in their midst. It is expected that those who are convenient will have the most to exhibit. Do not think that because it is a *State* exhibition that you, who have been in the habit of competing in county fairs, will be outdone, and that there is no chance for you to succeed. Let no farmer say—it will be no use for me to come in as an exhibitor, and that the prizes will all be borne off by those who come from *afar*. Let me say to you that the citizens of Dauphin county, at the first exhibition, and the citizens of Lancaster county at the second, fell into this error, and did not contribute as they could have done. After the fairs were over I heard farmers of those counties regret their want of confidence in what they *had* to exhibit—one said he could have taken such a premium, and another that he could have beaten such a production, and another that he could have beaten such an animal, *if* he had only known what was on exhibition before he left home.

Let no one for a moment suppose that he or she cannot be benefitted by preparing *something* for the Fair, but conclude that it is the aggregate zeal of *all*, that gives life, and energy, and spirit to the honorable and valuable competition of an agricultural ex-

hibition. There is no man in the community, who deserves the name of a farmer, and no woman who esteems the important place she holds in her husband's house, who does not, or may not possess something of which she may be justly proud; and even if they should be mistaken in this, they will at all events be entitled to the credit of having afforded a good example of thus testifying their approbation of an institution which they must be convinced is calculated to spread abroad information of the most valuable character, and introduce improvements of the highest value to us all.

The only way that a fair representation of the products of the farms of our country can be had is, for each farmer on an occasion of a State Fair like the present, to bring the best he has got, and a *part* of every thing, for there is no one so poor a farmer but what can excel in *something*. One of the best ways to promote agriculture, is the frequent meeting of the tillers of the soil—a frequent comparing of notes, and a social converse with one another upon the different modes of farming, and upon the results of certain experiments as tried by each in different sections, and upon different soils—a bringing together of their yearly products in competition, and an exchange of seeds and breeds.

Should the opportunity of the coming exhibition be duly appreciated by the farmers and others of our country, we may confidently expect to see together at that time, the largest concourse of people ever assembled in Pennsylvania. That the different branches of industry will be represented in almost endless variety, no one can doubt, and that our sister States will contribute largely and compete strongly with us for our prizes, we may confidently anticipate.

Every effort will be made by the Society, to promote the interests of exhibitors, and to encourage a laudable competition in all the industrial pursuits.

The Society anticipates that this, their third annual exhibition, will be much larger than either the first or second, and situated as it will be, where easy communication may be had to it from the East and the West, that it will possess every attraction and advantage that contribute to the success of an Agricultural Exhibition.

ROBERT C. WALKER.

Sec'y Penn'a State Agricultural Society.

ELIZABETH, May 6, 1853.

Care of Carts and Wagons.

It is strange what a difference there is among farmers with regard to the importance of housing their wagons and carts. Prudent, economical men in most things, are wholly insensible to the great loss they experience by allowing their expensive vehicles to be beaten upon and soaked by the storms, and checked and shrunk by the blazing sun.

Wagons and carts from the maker's shop are seldom well painted. The owner gets so anxious to be

using his new cart, and the old one seems so unbearable, that the cart is taken from the shop before the little openings in the wood and the joints are half filled with paint—the farmer “guesses it will do,” and away it goes to commence a straight-forward course to decay. A few days after, it rains. The cart is soaked through. The joints absorb water and swell. Bye-and-bye, when the water has dried out, after having been dragged about the farm for several days, the joints become loose. This process needs only to be repeated a sufficient number of times to give you a heavy, rickety body, which, in a few years, breaks up, and sends you to the mechanic again.

But the wheels are the most important part. Upon them has the most labor been expended in proportion to their weight, and of them should the most care be taken. The hubs, generally, are made of elm. Elm, exposed to the weather, is of short duration. It is used because it is difficult to split it in driving the spokes. White oak hubs invariably crack and open, when uncovered by paint, and exposed to the weather. White oak timber—indeed, all timber—loses its strength and tenacity, after being again and again exposed to rain and air. The hub then grows soft, the spokes settle into it a very little, and the consequence is that the tire is loose, and the blacksmith's aid is needed.

A wagon left out of doors will, in a few years, become a spongy, heavy mass, unprofitable to use. As proof of the correctness of these remarks, we know of a farmer who has run down three sets of wheels by exposure, and not by work, while another has a pair of wheels perfectly sound, built a year or two before his neighbor's first pair. In the first case, the wheels have never been housed, winter nor summer; but have been left by the roadside, as if impregnable as the stone wall to injury from the weather. In the other case, the cart has been uniformly housed, and always well painted. It must be very intelligible to the reader which is the wiser course.—[New England Farmer.]

Black Knot on the Plum Tree.

The following, on the above disease, from the distinguished entomologist, of New England, is worthy of attention.

“Let those who are interested in the solution of the question, carefully examine the twigs of last year's growth, and if any punctures or fissures apparently caused by insects are found in the smooth bark of these twigs, let every wounded part be marked by tying a piece of coarse yarn about it loosely. Then let these places be narrowly watched, to see whether warts originate therein during the summer, and let the results be made known to the public. On the other hand—let those twigs that are now free from punctures and wounds, be also carefully watched, and if warts are found to be produced upon them in the course of the summer, let the fact also be made known. In this way the public may be satisfied whether the warts do or do not arise from visible punctures or wounds made before the warts began to rupture the bark. You perhaps are aware that the practised eye can detect the incipient wart before it bursts through the circle of the twig. Cut it out in this state, as far as the inner bark and wood are found to be discolored, and apply fine salt or brine to the part, and the disease will be arrested.”—[Boston Cultivator.]

T. W. HARRIS.



IMPROVED APPLE PARING MACHINE--Fig. 1.

The annexed engravings represent a very ingenious and useful machine for paring, coring, and quartering apples, which is also applicable for purposes of a similar nature where the first operation is only required, and is owned by N. E. Smith & R. W. Fenwick, of New York City, to whom the entire patent has been transferred by W. H. Lazelle, the inventor. Patented Jan. 25, 1853.

Figure 1 is a perspective view of the machine, and exhibits the manner of performing the above mentioned operations. Figure 2 is also a perspective view of the machine on a larger scale, showing the same more clearly,

This machine consists of a semicircular stationary rack, A, having a hollow traversing lever, B, which turns on an axis, C, and is moved horizontally back and forth by means of the handle, G, and pinion, F, which latter gears into the teeth of the rack, A. The pinion, F, is fixed to the inner end of a hollow spindle, which turns freely inside the hollow lever, B, and has at its other end a flanged fork, D, on which the fruit, E, is placed to be pared. Supposing the fruit to be as represented, on the end of the fork, and the handle, G, moved round from left to right to the position shown in figure 2, the apple will be nearly pared by the stationary swinging knife, H,

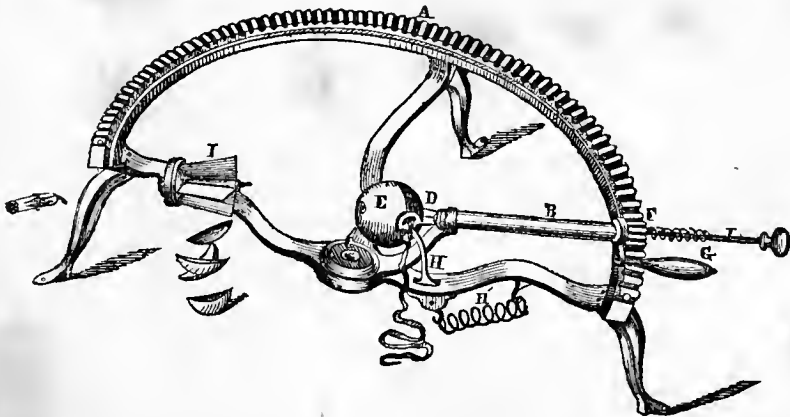


Fig. 2.

which is kept up in contact with the apple by the spring, H'.

As the lever is moved in a horizontal direction, as described, the prongs of the fork and also the apple, will traverse a semicircle, and the knife, H, will act longitudinally from the blossom to the stem end of the apple. By the pinion, D, being made to traverse the rack, the spindle attached to the pinion gives motion to the fork, and thus the latter is made to revolve with a rapid motion against the knife, H'. Thus it will be seen that the apple and the fork have two motions—one in the path of a horizontal circle, and

the other describing verticle circles. The swinging knife, II, being allowed to yield, and yet being firm and flexible, by means of the spring, II', renders it very efficient and accommodating for apples of different sizes and of unequal surface, and also obviates the great wear and tear from the excessive tension that it is necessarily exerted in the old machines on the spring, which is drawn out, as the knife traverses over the semi-diameter of the fruit. The apple being pared, and the handle drawn to the extremity of the rack, the machine is in a position ready for coring and quartering, the apparatus for performing these operations consists of a coring rod, J, which passes through the fork, F, having a button at its outer end and a collar at its inner end, in which latter is fixed a single prong that serves for holding the apple while being pared, and then retains it when it is knocked off the fork, D, after having been pared, in order to be cored and quartered. For the purpose of effecting the last named objects, the coring rod, J, is forced by the hand against the cutter, I, which consists of a hollow tube furnished with four knives. The number of these latter may, however, be increased to any extent when it is desired, instead of quartering, to slice the apple for drying or other objects.

After the apple has been cored and quartered, the rod, J, is allowed to return to its original position by means of a spring in the outer end, between the button and the pinion, P, the said spring being compressed as the rod is forced against the cutter, I, and resuming its former position when the hand is withdrawn—the apple and core falling into proper receivers.

This machine presents manifold advantages over anything of a similar nature, both with respect to cheapness, durability, and also saving of labor as well as time, it being capable of performing almost double the amount of work in a given time than can be done by any other. Among its advantages is the use of a traversing handle instead of a crank, by which it has a horizontal instead of a rotary motion, thus rendering the operation quicker and also easier to be effected. All the parts of this machine can be made light or as strong as desired, and not one of them is liable to get out of order. It is a machine that will endure without requiring to be repaired for a great number of years, and it pares apples with great rapidity and with astonishing precision. A silver medal was awarded to the inventor at the last Fair of the American Institute, it being the best machine ever before on exhibition.

Applications for State rights, which will be granted at a moderate price, and for machines to be made to the sole proprietors, N. E. Smith & R. W. Fenwick, 14 Vandam street, N. Y.—[Scientific American.

Self Loading Cart.

Measures to secure a patent for the above have been taken by Samuel Parks and Francis C. Rue, of Warren, Ill. The novelty of this cart consists in having one or more plows underneath the axle, and in fitting around the wheels a series of buckets, by which the cart is made to both dig up the earth, and likewise load for itself. The plows are secured to an adjustable frame underneath the cart, and the depth to which they are required to enter the ground is regulated by a lever attached to a transverse bar at the back of the frame, which is operated by the attendant. The position of the lever and that of the plowshare being maintained by resting the front end of the former upon the step belonging to a bar which is

suspended in front. The earth is raised up into the cart by a series of buckets formed around the wheels, and which, as they revolve, are filled and discharge their contents into the cart.—[Scientific American.

For the Farm Journal.

Raising Poultry,

WEST PHILADELPHIA, May 10th, 1853.

J. L. DARLINGTON, Esq.,

Dear Sir:—In November 1851, not enjoying good health, I was induced to direct my mind to the raising of Poultry, as an amusing employment, attended with a moderate degree of exercise, which would in all probability prolong my time with my family. I purchased three pairs of Cochins, Victoria stock, three Cocks and three Pullets. I soon found, (with proper attention) that their precocity and prolific character, combined with hardiness, would require more extensive accommodations; one of the Pullets being the mother of eighty chickens before she was a year old, (of course she did not hatch them ALL;) she laid forty-four eggs in succession DAILY. I became convinced that there had not been sufficient attention given by the Farmers to that branch of their business, or our country would have been much better supplied with poultry. My success has induced several gentlemen to solicit a publication, giving a description in detail of my chicken establishment, also the result of my different experiments in hatching and rearing chickens by artificial means.

I will commence with my chicken houses.

The west building is eleven feet square, sixteen feet high on the south side, and twelve feet high on the north, with a cellar four feet deep, the whole divided into three stories. The basement eight feet high. The next story seven feet high, with a slanting ceiling parallel to, and four feet below the roof: a passage four feet wide partitioned off the north side, with steps for the Fowls to pass to the roosts, and also to the nests (eighteen in number) which are situated near the middle of the building, the best location to protect them from excessive heat or cold; the hens entering through holes in this partition, to the nests, the eggs being taken out from a passage on the other side, where there are small panes of glass set into each shutter, that opens into the nests: this building is lighted and aired with windows in each story, on the south side, one window on the west lighting the passage to the roosts, and one in the east end near the ceiling with a trap door in the roof for ventilation, which is only partly lifted, by means of a cord and pulley attached to the covering over the trap door: all the windows have glass, and open to give air, which is essential to the health of the fowls. Adjoining this, on the east is a room for feed, five feet by eleven—next to this, is a building twenty-four feet by eleven—glass on the south front, and east end, with glass roof, pitching to the

south, with a passage way two feet wide by three feet high, for the older fowls to go to the roosts and nests, from an open shed east of this building; east of this shed, on the same line, there are three other chicken houses ten feet square, one story high, with glass windows on the south side: all the houses have separate yards, joining to a grass lot shaded with trees: the fowls enjoy the luxury of this lot alternately, the short time given them is very industriously employed in eating the grass, no time being allowed them to tread it down; by this arrangement a SMALL lot is rendered equal to a LARGE one.

North of this range of buildings is a Duck yard and house, the lower part for ducks, and the upper for chickens, and an artificial Pond, supplied with water, by means of a pipe inserted into a wooden pump, six inches below the nozzle, that when the pump is used, a portion of the water runs into the pond, as well as distributes fresh water along the line, into the several chicken yards. In the duck yard are two kettles, holding about fifty gallons, covered with a shed, to boil feed in, for the ducks and chickens; all these buildings I have found indispensable in breeding the chickens distinctly, and without mingling. My first experiments in hatching by artificial means, was with an Eccalcobion, about four feet long, two feet high, and two feet deep front to back legs, twenty inches high, with four drawers, four inches deep, and two feet square, placed near to one end; the drawers encompassed with a copper case, containing a sheet of water, three inches thick, connecting with a large body two feet each way, through which a small iron stove passes to heat the water. In the top drawer are two openings, one front and one back, with valves connected by a small iron shaft with the front valve, where is inserted a glass tube with a bulb at each end, nearly filled with mercury, so regulated, that when too warm or too cool, the mercury will expand or contract, throwing the weight from one end of the valve to the other, opening or closing it, as required; this self regulator of the heat in the drawers, removed the necessity of so close attention to the fire. This mode will hatch the eggs by keeping the heat in the drawers between 98° and 104° Fahrenheit. My next experiment was, to pile bricks around the stove in place of water; I found the HEAT would pass around the drawers as well as the WATER, and keep a uniform heat that would hatch eggs equally well, but attended with more PERSONAL CARE. I next experimented with HORSE DUNG as a means of generating heat, which has resulted in perfect success, in producing fine healthy chickens in twenty-one days from the commencement of their heating. This mode will be more useful to the farmers, as they have the material at hand, and would cost nothing but a little labor to accomplish the hatching of eggs to any extent. This MAMMEL (to use the Egyptian name,) I will now give a minute description of that every farmer may build one for

himself, and be able to perfect the hatching of eggs, and rearing of chickens without the aid of the hen.

The mammel is a building thirteen feet by sixteen feet, with a tight grooved partition dividing it into two apartments, the front one seven feet, the other nine. In this partition are two openings to receive the front ends of the ovens. These ovens are six and a half feet long, two feet two inches wide, nineteen inches high on one side, and eighteen inches on the other in the clear, the back end closed, and made entirely of inch boards; lined with tin, soldered water tight, with shutters in two equal parts, hung to the bottom and in the middle with hinges, two buttons to close the front end. In the upper part of the shutter there are two sliding valves, each four inches by six, to give air, and regulate the heat. The outside of the ovens and the partitions should be well coated over with pitch to exclude moisture, and preserve the wood from decay. The ovens should be placed eighteen inches above the ground, supported with posts, at the back end, and four feet apart, with an open board partition, the boards running up and down ten inches apart, to divide the dung between the ovens, and yet not entirely separate, that in renewing the dung of one oven, the others may not be chilled. There should be a window in the back, to give air and receive the dung through: the dung should be such as is made in a well littered horse stable, and used straw and dung mixed and well watered, while being thrown into a pile, where it is to remain twenty-four hours, to soak, and admit the redundant water to pass off; it should be placed loosely around the ovens, which will not require renewing for two weeks; then renew only half of the length of the oven at a time, judging from the heat when more of it is to be renewed, which will be required about every two weeks. Tan will make a very good bed under the ovens in place of the dung; the heat will last longer. The egg box four feet long, two feet wide, three inches deep, lined with baize; ten inches of one end covered with wire to keep in the chickens that are just hatched—the other part of the box should have a light frame with twine placed between the eggs and attached to the frame, to turn all the eggs at one move. The egg box rests on a carriage which runs on rails laid on the bottom of the oven, with a moveable attachment to run the carriage entirely out of the oven; the egg box turns on a centre, to reverse the ends in the oven.

The carriage is made in two parts, the lower part has grooved wooden pulleys let into it, to roll on the rails, the upper part is connected to the lower with small bars of iron, about eight inches long, with holes for a wood screw in each end, and the screws put into the top and bottom, where they lay together; which moves like a parallel ruler; and confined to different heights by a hook, about ten inches long, fast to the upper part, and hooks into staples, driven into a piece of wood fastened to the lower part; this

arrangement is to sustain the egg box at different heights to suit the required degree of heat, which I have found to be, as near as it can be kept, to one hundred degrees from the first, to the last stage. The egg box should be moved out of the oven in the morning and towards evening, to avoid a strong light, and only twice a day, with as little noise as possible, to insure successful hatching.

My feed room CAN be made PERFECTLY DARK; through one of the doors is a hole one and a quarter inches in diameter, over which is a piece of cloth, an inch hole in it, that an egg will exclude all the light except what passes through it, when in four days can be seen the first progress of the chick, which, if not visible, boil it for the young brood.

Next in order is the rearing the chickens without the aid of the hen. In the basement of the first named building, on a level with the top of the Eccealeobion, is a platform four feet by seven, with a slide, to open in fine weather into a small yard, also, one to open into a small wire front box, over the Eccealeobion which is moderately heated from a small stove; in this box is an ARTIFICIAL mother, made of rabbit skins, hung about two inches from the bottom; where the chicks are first placed; in three or four days they are let into the next adjoining apartment, where there is a sheep skin mother. Over this apartment is another with a sheep skin raised higher at one end than the other, for the chickens further advanced, (to run under.) In the glass building, is a platform sixteen feet by four, about four feet above the ground floor for chickens still further advanced, (with a yard to it,) they are next shut out from this apartment, and run with the full grown fowls. All these apartments will accommodate about five hundred chickens of the different ages. This mode of hatching and rearing chickens is attended with not half the loss that usually takes place, when hatched and reared by the hen.

With regard to feeding, the first meal, I give grated stale wheat bread, laid on a sanded floor, next I give bread boiled in milk, and while hot, mix coarse ground Indian meal, making it nearly dry; for the older fowls, I give wheat screenings and whole corn, once a week boiled meat.

It will here be seen, that I have made the management of eggs, as plain and simple as Captain Cooke, "standing one on its point."

Yours most respectfully,

JOSEPH S. KEEN.

Bedford County Agricultural Society.

President—JOSEPH B. NOBLE.

Vice Presidents—HEN. JOB MANN, HENRY YOKE, JOHN BOWSER.

Corresponding Secretary—William Hartley.

Recording Secretary—John Mower.

Treasurer—Samuel Brown

For the Farm Journal.

Agricultural Review, No. 3.

Wheat, third in rotation, is suited to the soil, and when it escapes the effects of disease, insects, &c., is profitable; some plough but once, but it is becoming more customary to plough twice, being more likely to insure a good stand of grasses, where this is done; plough deep, immediately after oats harvest, harrow once, then haul and spread 20 to 25 ox-cart loads barn-yard manure, per acre, ploughing this under (directly preceding sowing,) with a shallow furrow; mark out in six pace lands, sow, harrow twice, sow four to six quarts timothy seed, *phleum pratense*, and roll it in, or cover it with the last harrowing; when drilled, which is practised to a considerable extent, harrow twice after ploughing, and sow grass seed immediately before or after the drill; time of seeding, from the 10th to the 25th of 9th month, (September;) of harvesting from the 1st to the 15th of 7th month, (July,) cut when the heads begin to droop; if clear of grass, bound directly after the cradle, stood in open stock for 24 hours, then hauled in; when necessary to shock against rain, let 2 hands take ten sheaves, place 6 of these in a double row, 1 at each end of these, press them into a small compass at top, move the bands of the 2 remaining sheaves (which should be large ones) nearer the butts, let these be raised perpendicular at the sides of the shock, spreading the head at the same time, and while one person clasps both, let the other bind them together. Wheat will put up in this way, will withstand any ordinary rain.

Seed. Numerous varieties have been, and are at present in use. *Rock*, a white wheat, yield of straw good, but grain too small to produce a fine crop; abandoned. Prime samples of White wheat, from Maryland and Genesee, N. Y., have been tried and proved failures. "Jones," "Hershy," White wheats, "Blue Stem," and "Red Chaff Bearded," produce fair crops at times, but are subject to the rust and fly. The Mediterranean, owing to its comparative exemption from these, having a stiffer straw, and arriving earlier at maturity, is coming into general favor. This crop is subject to the ravages of the Hessian fly, winter killing and rust. notice writers of various sections recommend late sowing to escape the Hessian fly. Experience with us has caused the date of sowing to become much *earlier* than used to be customary. Late sowing *may* avoid the fly in the *fall*, but the plants will be weak, exposed in consequence, more greatly to the vicissitudes of the winter, and if the fly appears in the spring, will be a very fit subject for it; it will also tend to retard its maturity, thereby rendering it more liable to be caught by rust. Varieties that mature early will be more likely to escape the latter; winter killing may mostly be avoided by freeing the ground from surplus moisture. There has also appeared within the

last three years, a small insect, or *midge*, which preys upon the kernel in its milky state, materially affecting it. White wheats have been most injured. It has little resemblance to the barn *weevil*, although this is the name which the farmers give it. I have no doubt it is the same thus described in the Cultivator of 1834: "The Wheat crop has been more or less injured in the Northern States for some years, by small maggots, which prey upon the kernell, while growing in the field, and before the grain has become hard. In some instances nearly the entire crop has been destroyed, while in other cases the injury has only been partial. It has been generally believed that the maggots have proceeded from a fly, which deposits its eggs while the wheat is in blossom, or soon after. It has also been remarked that the fly is seen but a few days, and that if during its presence, the wheat ear has either not burst in the sheath or is far advanced towards maturity, no evil is experienced from the insect. No preventive of the evil has been published among us."

I suppose it to be the *Cecidomyia tritici*, and this to be identical with the cause that led to the almost total abandonment of wheat raising in Dutchess county, New York, and some other localities, some years since.

I notice upon a perusal of the Patent Office Report for 1851, that this insect has first appeared within the last three years, in the great wheat growing district west of Cayuga lake.

Average per acre of this crop, eighteen bushels; price \$1 05, for the last ten years, from accurate accounts kept. A market within five or six miles.

Cost of raising per acre:

Ploughing three-fourths of a day,	-	\$1 50
Harrowing twice,	- - -	50
Hauling manure,	- - -	3 00
Spreading "	- - -	75
Seed, one and three-fourth bushels,	-	1 80
Harvesting,	- - -	2 00
Thrashing and cleaning, five cents per bushel,		90
Marketing,	" " " "	90
One-fifth of twenty-five loads of manure, a	\$1, 5 00	
Do., of fifty bushels lime, a 15 cents,	1 50	
Fencing,	- - -	1 00
Taxes,	- - -	50
Interest on \$85,	- - -	5 10

Expense,	- - -	\$24 40
Eighteen bushels, a \$1 05,	- - -	18 90
Straw,	- - -	7 00

Product,	- - -	\$25 90
Expense,	- - -	24 40

Profit per acre, - - - 1 50

The above was written previous to the appearance of the recent articles on the "Wheat Fly," in the

Farm Journal, and although it is somewhat a repetition of what is there clearly described, I offer it as it stands.

C. B.

Birmingham, 5th month.

For the Farm Journal.

"The Strawberry Question"

HOLMESBURG, May 10th, 1853.

TO THE EDITORS OF THE FARM JOURNAL:—I do not think that the spirit in which the article by Mr. W. R. Prince, in your May No. was written, at all calculated to awaken the scientific inquiry he professes to admire. Mr. P. is emphatic in his "*I declare it to be utterly impossible.*" Of what importance is his "declaration" in a scientific question? In science we want facts, and without these we care for no man's "declarations." In my communication to the Pennsylvania Horticultural Society, I briefly detailed facts as I had observed them, and exhibited plants illustrative of my remarks at the same time. I don't care what the facts prove—I have no predilection for any particular theory, I am in no way committed to any principle. I have used the utmost care in my experiments and observations, indifferent as to the conclusions I might come to. Can Mr. Prince say why my statements should be received as "based in error, and calculated only to mislead?" Does he wish me when I speak of a fact within my own knowledge, to swear to its truth on the "Sultan's Beard," the "Prince's Moustache," or come down with a clencher? That Mr. Prince in all his "long experience" never saw any deviation in the sexes of the Strawberry, is of no more value in determining that they do not deviate, than the Sultan's opinion when

"He saw with his own eyes the world was round,
Was also certain that the earth was square;
Because he had journeyed fifty miles, and found
No sign that it was circular any where."

Not wishing to occupy much of the valuable time of our society, my remarks were too brief to be as clear as they might have been. I will apply them so far as they go to the question as Mr. P. himself states it:—

Does the pistillate Strawberry plant, which by itself is barren, change its sexual character by the treatment referred to, and produce fruit? I reply. I took for experiment twelve runners from pistillate plants in my forcing house—plants so pistillate that I had to become indebted to the kindness of Mr. Buist for a plant of Cuthill's Black Prince, which he accidentally had in bloom, to fertilize them with.—These runners were placed by themselves in our vegetable forcing house early in the winter, in a position where the temperature could have seldom been over 55°. Seven out of these produced perfect flowers, the other five pistillate. The latter I fertilized from the perfect ones with a Camel hair brush, and both kinds produced their fruit. The fruit was however, small, none exceeding an inch and a quarter in circumference, a fact I attributed to the weakness of the

original forced plants, and not to defective sexuality. I may be in error in my opinion that the change from one sex to another, was the result of cultivation. I ask no quarter for *an opinion*, but if that was not the cause of the change, what was?

As Mr P. asks for "conclusive" proof, by which I presume he means a reference to some authority otherwise than my own; I will give an additional fact which will verify it in some degree, and show not only that a staminate or perfect flowering plant *can* be obtained from a pistillate one, which is all I have undertaken to prove hitherto, but that both kinds can be obtained at one time on the same plant. I have a bed of McAvoy's Extra Red. When they commenced flowering recently, there were as many perfect flowers as pistillates. On pointing these out to a gentleman, (as firm a believer in its truly pistillate character as Mr. Prince himself, and who has probably paid as much attention to the subject,) he decided that an erroneous kind had got mixed with them somehow. On examination I found that the pistillate spikes proceeded from the *same plants* as the others. I have sent you a root with both on, and as we are threatened with a further communication on the subject in the Horticulturist, I have sent Mr. Barry a specimen also. The testimony of two witnesses ought to be true.

As I have no additional facts to offer, I suppose I shall do no good by following Mr. Prince into the subject of "eternal and immutable law." All laws are "immutable" until we find exceptions, and sometimes what we fancy are "immutable" laws, are only the effects of other principles. There is a pistillate plant of the Euphorbiaceous tribe of plants, in a locality thousands of miles away from any individual of the same genus or species; well known to Botanists as producing *perfect* seeds. Would Mr. P. like to have an account of it?

THOMAS MEEHAN.

For the Farm Journal.

Crops in Luzerne County.

KINGSTON, Pa., April 29, '53.

MR. J. L. DARLINGTON:

Sir—I send you enclosed one dollar, the subscription price of the Pennsylvania Farm Journal, for the present year. I have taken it from the beginning, and am very much pleased with it. Now you may say to my brother Farmers in Pennsylvania, that from 30 to 31 bushels of oats sown last year, on less than twelve acres of mowing valley land, I threshed and measured 740 bushels of oats; 371 bushels were round measure; from one of those large field machines, which are used here for threshing. My land was corn stubble and my wheat on the same land, I think from appearance will make 25 bushels per acre.

Yours,

M. F. M.

For the Farm Journal.

Mercer County Agricultural Society.

EDITOR FARM JOURNAL:—

In a previous number of your "Farm Journal," I have observed a request for reports of any Agricultural Societies that may be formed in any of the counties of this State.—I have not observed any report from this county yet, in your Journal, although we have had a society in existence for over a year. It is called the "Mercer County Agricultural Society," and is intended, I presume, to co-operate with the State society, as required by law, in carrying out the purposes of its organization. It was organized early in 1852. Its first exhibition was held in Mercer, in September last, and proved very successful. The display of stock was much better and larger than the most sanguine had anticipated. Our proximity to the Western Reserve in Ohio, where there is a good deal of fine stock, has been the means of introducing better qualities among us, and the consequence is our stock has been improving, even in the absence of the stimulus offered by an Agricultural Society.

The amount and variety of articles displayed in the several branches of domestic products—as also fruits, implements, and the mechanic arts, evinced considerable progress, and much improvement.—There is, of course, a great deal to be done yet, and we hope our society will beget a spirit that will lead to the highest state of improvement, in all the different branches of agricultural industry, and the mechanic arts as applied to agriculture.

The number of members of the Society the past year, was between two and three hundred, and the amount expended in premiums over \$300. Another exhibition will be held next fall.

The officers for the present year will be found below.

Yours truly,

W. WAUGH.

President—DANIEL BAIRD.

Vice Presidents—(28, one in each township.)

Secretary—A. M. FLEMING.

Recording Secretary—W. Waugh.

Treasurer—I. D. Moore.

Librarian—David Clark.

For the Farm Journal.

Juniata Agricultural Society.

At an election of the Juniata County Agricultural Society, held in the court-house, borough of Mifflintown, February 8th, 1853, the following named persons were chosen officers for the ensuing year:

PRESIDENT—Everard Oles.

VICE PRESIDENTS—John Woodside, James Anderson, Dr. Joseph Kelley, John Watson, John P. Shitz, William Banks, Col. Charles A. Thompson, Samuel Gayman, William G. Thompson, Hon. John Dimm.

SECRETARY AND TREASURER—Jacob A. Christy, Esq.

CORRESPONDING SECRETARY—Lewis Buckfield.

MANAGERS—Joseph Pumroy, John Jacobs, George McCulloch, Dr. John Irwin, John Kepner, Daniel Leiber, Gen. William Bell.

L. BUCKFIELD, Corresponding Secretary.

Agricultural Knowledge.

Address by Amos R. Shelley, delivered at the semi-annual Exhibition of White Hall Academy, Cumberland county, Pa., March 30th, 1853.

Society has no wealth that is so uniformly underestimated as that of Agricultural Knowledge. Land and Labor may be ever so abundant, yet without Knowledge they will remain comparatively worthless. Experience and experiments, truthfully recorded in books and periodicals, have not only a present value, but, if really important, they will continue to bless all coming generations in after time. To obtain this knowledge, it is necessary to resort to the assistance of chemistry, and its kindred sciences, and it is only by a continued recurrence to these sciences, accompanying practical experiments, that we can hope to substitute sound, rational, and profitable modes of cultivation, in place of vague popular prejudices, or blundering ignorance. For it has been well said, that industry is never so efficacious as when directed by science. If the preliminary scientific investigations are made, and the farmer knows exactly the chemical ingredients of the soil which he works, and the substances which compose the different grains, and their straws, or vegetables which he wishes to raise upon such soil, is it not plain that he can supply to it exactly those materials that it requires; or if he does not choose to do this, that he can so adapt his farming, as to grow upon the soil only such plants as require little or none of those ingredients of which it is lacking.

Almost every State in the Union has within her borders some agricultural periodical, some work by which the farmers can become acquainted, and can acquaint each other, with new facts in farming, the results of experiments, improved modes of operation, every thing else which would tend to improve the soil and the mind, and render more and more respectable, and advantageous, an employment which is more congenial to the natural disposition of man than any other. Pennsylvania, though one of the first States in importance, was, until recently, without such a publication, but was entirely indebted to works published abroad for her knowledge of agricultural improvements—to publications which, although admirably adapted to their own localities, are too frequently only the medium of error to undiscriminating minds amongst us, who do not sufficiently know or consider the great difference in soil and climate between this State and those North and

South of us. This want, however, is now happily removed. We have now a periodical of our own, which supplies every deficiency. In the Pennsylvania Farm Journal, published at West Chester, in this State, the Pennsylvania farmer has a valuable auxiliary, and the different agricultural societies in the State, a worthy organ in which to publish their proceedings. It becomes the farming community to sustain well this publication, and avail themselves of the valuable information contained in it. Though undoubtedly excellent farmers in their way, it will surely not be pretended that Pennsylvanians are at the end of improvements in advantageous and judicious means and modes of cultivation. In fact it must be conceded that we are behind many of the other States in many respects, that would be of great advantage to us if they would be more attended to.

We live in an age of progress, and the farmers of Pennsylvania must not think that agriculture alone is to stand still, while science is spreading her wings, and enfolding every occupation of busy life in her vivifying embrace. Look for a moment at the results of scientific knowledge, applied to practical and useful purposes every where around us. It is a wonderful age, and under its pressure the world moves along at a tremendous rate. Agriculture must partake of the spirit that is animating all other branches of business. The time has come when our agriculturists must occupy their proper position in society—that position which God and nature originally designed for them.

With these few scattered remarks, I leave the subject with you, trusting that you will all see the necessity of improving this elevating, and fostering this most important branch of business.

BOOK NOTICES.

PRAIRIE FARMER, published at Chicago, Illinois, edited by Ambrose White, and J. A. Kennicott, Horticultural editor. This is one of our best exchanges, abounds in valuable matter, and is creditable to the great and growing State it so ably represents. There is an off-hand, piquant style about its editorials, which we like. Terms \$1 00 per year.

OHIO CULTIVATOR, published by M. B. Bateham, at \$1 00 per year, issued semi-monthly. This is the Pioneer and now well established agricultural work of Ohio. We always turn to its pages with pleasure, sure to find in its practical and able editorials, as well as original communications, something worthy of farther circulation.

WATER CURE JOURNAL, published in New York, monthly, at \$1 00 per annum by Fowler & Wells, N. Y., a good exponent of the Hydropathic System of treating disease. The advantages of water externally and internally, in preference to artificial stimulants, as promotive of health and preventive of disease are

generally recognized. As a *curative* agent, it is but little known comparatively. The work before us treats of Hydropathy in both aspects. In the great multiplication of nostrums, and the increased use of Iodine, Mercury, as well as vegetable poisons, the fact of the human stomach being intended as the receptacle for *food*, not *physic*, seems well nigh forgotten. Some valuable hints for family practice, may be culled out of the Water Cure Journal.

THE PHILADELPHIA FLORIST AND HORTICULTURAL JOURNAL.—This has lately been revived, under a new editor, with new improvements, and we welcome it with its able corps of contributors, such as Brinckle, Buist, Haldeman, Meehan, &c., with pleasure into the field.

Each number is illustrated with a superior colored lithograph engraving. Philadelphia, of all cities in the Union, ought to have a Horticultural Journal of its own, and it would be strange indeed if it were not well supported.

Work for the Month.

FARM.—The corn and potato crops now require particular attention. The latter may still be planted. This month is a very important one for the corn. The early growth should be stimulated as much as possible, by thorough and repeated passage of the cultivator, which should not be stopped till harvest time. Superphosphate of lime, a compost of Guano and plaster, with a sufficient amount of soil, to prevent its caustic effect,—Poudrette or ashes, should be applied to each hill, and well stirred in. In cool mornings, the cut worm will be active. We have found fall ploughing generally a sufficient preventive. A dressing of salt, five or six bushels to the acre, before planting, is a security, and has also a fertilizing effect, particularly where the soil contains lime. If these have been neglected, we know of *no remedy* but constantly stirring round the hills, and applying fertilizers to push it forward. When settled warm weather comes on, with a hot sun, his occupation is gone. The plough should never be seen inside the corn field after it is planted.

Root crops of carrots and beets, may still be planted in rich, deep soil, and should be attended to at once. Ruta Bagas a month later. Put in corn for fodder, without fail, and turn to directions in February number of Farm Journal, by David Thomas, for sowing, harvesting and curing. It is the best article which has been written. Plaster should be sown occasionally over barn-yard, hog pen and stables.

Place lumps of rock salt in field, so that cattle, sheep and horses may have access to it, at pleasure.

Latter part of this month, hay, particularly where clover predominates may be cut. When the blossom has assumed a brownish hue it is time to commence. Hay should not be stirred often in the field, as its quality is injured by too much drying. Salt spread

over the mow, prevents danger from heating. A good revolving horse rake, will render hand rakes entirely unnecessary, and save time and labor.

FRUIT ORCHARD.—During this and beginning of next month, is the time for regulating the heads of fruit trees, by pinching off the terminal bud, or shortening, in process. The shape of trees is thus under perfect control. Thin off fruit where too abundant. Mulch the surface of ground under trees, to keep it damp, and preserve an even temperature. Give attention to caterpillars as before recommended. Save your plums from the curculio, by tapping the tree suddenly with heavy blows with a mallet, every morning, and catch them beneath in sheets spread for the purpose. Try "the little Turk," with the coating of white wash, applied to the fruit through a syringe, or dusting the tree with air slacked lime. One of our friends near West Chester, has succeeded well for two or three seasons with these remedies. Such fine fruit is well worthy the trouble of repeating the application for a few times. The peach borer also requires close attention this month, and cutting into his hiding place in the bark just below the surface of the ground—see article in present number.

Thin out gooseberries and currants, where bushes are too much loaded, and cover ground with salted hay, to prevent mildew. Prune grape vines where needed. The productiveness of strawberry beds may be increased by an occasional watering between the rows.

Wash the bark of trees as before recommended, if not already done. If of sluggish growth, dig in well rotted manure, or guano. If any symptoms of blight appear in pear trees, use the knife immediately, and cut off below the part affected.

VEGETABLE GARDEN.—Most of the early crops of lettuce, radishes, spinach, &c., being now past, the ground should be cleared and prepared for late beets and carrots. Take advantage of moist days for planting out succession crops of cabbage. These may occupy ground in paths of onion beds. Water cauliflowers in dry weather, and draw up earth to stems. Such as are advanced in flower, should have the leaves bent down over them, to protect them from the sun and rain.

Thin out beets, carrots and parsnips. Stir frequently and deeply with the hoe, and keep down all weeds. Kidney beans may be planted, and beet seed. Re-sow such seeds of brocoli, cauliflower, cabbage as have missed.

Celery plants that have arrived at sufficient size should be planted out for early crop. Dig a trench spade deep, laying the earth equally on each side, and fill in bottom about three inches deep, of well rotted manure, incorporating it well with the soil. Cut off the tops of plants, and also ends of roots, before setting out, and then plant with dibble six inches apart. Water well as soon as planted, and

shade with boards, laid on sticks, across the trench till growth is established. Earth up in a dry time as the plants continue growing, and avoid covering the heart, repeating it every two weeks, till sufficiently blanched.

Cucumbers, melons, pumpkins, squashes, okra, peas, and corn may still be planted. Set out sweet potato sprouts in rows, four feet apart, in rich light soil; and keep clear of weeds till vines cover the ground. A small quantity of turnip seed should be sown this month for early autumn use.

Plant out balance of tomato, egg plants, and peppers, also pot and other herbs from seed bed.

Herbs for drying should be gathered, as they are beginning to come into flower, and laid in the shade, so as to dry gradually.

FLOWER GARDEN.—Continue the directions given last month. Mow grass plots, and follow with the roller. Secure the young shoots of roses and flowering plants, to stakes or main branches to prevent being broken with the wind. This gives them a good shape, and they will flower better for it. Hoe and rake flower beds and walks frequently. It adds much to the appearance of a flower garden. Transplant annuals in damp weather, and sow again for late blooming. Green-house plants generally may be planted out this month. Continue to plant dahlias. Drive a strong stake down firmly beside each one, and secure it safely to prevent being broken with the wind. Tuberose and gladiolus, may still be planted. Tulips and hyacinths are improved by being lifted once in two or three years, and replanted in fresh soil, or the old one enriched, observing after lifting to stow away in a dry airy place, and plant again in the fall. Bulbs should be lifted when the tops have decayed.

Pennsylvania Horticultural Society.

The Stated Monthly meeting of this Association, occurred on Tuesday, May 17, in the Chinese Saloon, Philadelphia, Dr. W. D. Brinkle, Vice President, in the chair.

The display on the occasion was one of interest, consisting of many fine specimens of green-house plants and esculents, betokening much skill in cultivation. Of the former a few of the choicest might be noticed. In Mr. Buist's collection, shown by Thos. Fairley, foreman, were remarkably well grown specimens of *Azalea Maitlandii*, *A. variegata*, *Ixora coccinea*, *Alstromeria bicolor*, *Calceolaria*, *Bletia hyacinthoides*, &c., and a dozen pots of indigenous plants: J. F. Knorr's gardener, John Bell, presented a collection not in competition. A beautiful plant of *Deutzia gracilis*, for the first time shown; *Nierembergia gracilis*, very pretty; *Scutellaria Ventanali*, fragrant *Cestrum aurantiacum*, *Jasminum gracile*, a dozen Geraniums, as many Cinerarias and a number of Calceolarias of much beauty. Thomas Meehan, gardener to Caleb Cope, brought *Physurus argenteus*, *Chysis bracteescens* both new, and shown for the first time. *Statice Dicksonia* rare; *Allamanda neriifolia*, good specimen; *Fabiana imbricata* and *Fuchsia Diadem*. Also, a design and baskets of Cut Flowers; in the

latter was the 105th flower of Victoria Regia, from the original plant, and a basket of Wild Flowers.—Isaac Collins, Gardener to the President had a large and fine plant of *Euphorbia splendens*.

Wm. Grassie, gardener to W. W. Keen, West Philadelphia, exhibited a specimen of *Hoya imperialis* new and for the first time seen, a magnificent plant; a new Pelargonium called Madame Rosaltii of peculiar markings; a fine specimen of *Calceolaria magna lutea*, and many other choice species. James Bisset, gardener to Mr. Dundas, exhibited a fine specimen of *Azalea variegata*, Gloxinia, and other select plants. Adam Uber brought a large collection of Pelargoniums in the finest state of cultivation. A. Parker had a table of native plants. Thomas Meghran, gardener to R. Cornelius, exhibited a handsome design and a basket of choice flowers.

On the fruit table were several dishes of grapes. From Mr. Cope's houses were the white Frontignac and Black Hamburg. From J. Fisk Allen, Salem, Mass., a bunch of his seedling Black Hamburg and seedling Musque verdel; also the Grizzley Frontignac and verdelho, parents of the seedling.

And among the extensive collection of vegetables were Cucumbers, forced Potatoes, Cauliflowers, &c., by Thos. Meghran, gardener to R. Cornelius. Fine Sea Kale, Cauliflowers, Tomatoes, Asparagus, &c., by Thomas Meehan, gardener to C. Cope. Rhubarb, of mammoth proportions, by Samuel Cooper—one leaf and petiole weighing three pounds and three quarters. Fine Rhubarb, two kinds, by Wm. Hobson. William Johns exhibited a dish of French Beans, Tomatoes, and Beets. Enormous Asparagus by J. M. Tage.

Reports of the Committees for awarding premiums on plants and flowers:—*Pelargoniums*, for the best six and for the second best, to Adam Uber; for the best specimen to Thos. Meehan, gardener to C. Cope. *Tulips*—for the best twelve to Thos. Fairley, foreman to Robert Buist; for the second best, to Thos. Meehan. *Plants in pots*—for the best collection, to Thos. Fairley; for the second best, to Thos. Meehan. *Plant in a pot*—for the best, to Isaac Collins, gardener to Gen Paterson, for *Euphorbia splendens*. *Indigenous plants*—for the best display to Thos. Fairley. *Plants shown for the first time*—to William Grassie, gardener to W. W. Keen, West Philadelphia, a premium of five dollars for *Hoya imperialis*, in bloom for the first time in this country, it is believed; and to Thos. Fairley, a premium of three dollars, for a fine collection of Geraniums, exhibited for the first time. *Bouquet designs*—for the best, to Thos. Meghran; for the second best to Thos. Meehan; for the best hand bouquet, to Robert Kilington. *Basket of Cut Flowers*—for the best, to Thos. Meehan; for the second best, to Thos. Meghran; for the best of indigenous flowers, to the same. And special premiums for a fine collection of plants to James Bisset, gardener to James Dundas, and for a basket of indigenous flower to Thos. Meehan.

On Fruits—*Grapes*: for the best three bunches, the white Frontignac, to Thos. Meehan, gardener to C. Cope. The Committee noticed specimens of two fine Seedling Grapes, from John Fisk Allen, of Salem, Mass., which they think worthy of a more detailed notice in their next ad interim report.

On Vegetables—*Cucumbers*: for the best brace to Thos. Meghran. *Rhubarb*—for the best twelve stalks, and for the second best, to William Hobson. *Asparagus*—for the best twenty-four stalks, to James M. Tage; for the second best, to Thos. Meehan. *Peas*—for the best half peck, to Thos. Meghran. *Potatoes*—for the best half peck, to the same: for the best dis-

play of Vegetables by an amateur, to Thomas Meghnan; for the second best, to Thos. Meehan; and a special premium to Samuel Cooper, for a very fine display of Rhubarb brought in too late for competition. The Committee called the attention of the Society to a dish of French Beans, Plum Tomatoes and Beets, shown by Wm. Johns.

AD INTERIM REPORT.

PHILADELPHIA, May 17, 1853.

To the President of the Pennsylvania Horticultural Society:

The fruit Committee respectfully submit, as usual, an ad interim Report on the specimens of Fruits submitted to their examination since the last meeting of the Society:

From Charles Kessler, of Reading, Pa.:—The Pfeiffer Apple—noticed and described in the Report for April, but not then sufficiently mature for testing, has since been examined, and is regarded as of "good" quality.

From John Gorgas, of Delaware:—The Freeze and Thaw Apple—grown on the farm of his father, Roxbury township, Philadelphia county, Pennsylvania. Size medium; conical; profusely striped and mottled with bright red on a yellow ground, with a number of light dots, and frequently one or more white splashes near the base; stem three-fourths of an inch long, slender, inserted in a wide, deep, acuminate cavity, partially russeted; calyx small, closed, set in a moderately wide, superficial, wrinkled basin; flesh of fine texture, but deficient in flavor, and on that account can scarcely be considered of "good" quality, if the specimens were cut at the proper time. Mr. Gorgas informs us that it may be left on the tree till it repeatedly freezes and thaws, without sustaining injury: hence the name.

From Charles Kessler, of Reading:—A Red Apple—below medium size, which originated on the premises of Mr. Hains, of Pricetown, Berks county, Pennsylvania. Form roundish oblate; skin thin, striped and marbled with bright red, and marked with numerous whitish dots near the crown; stem long, rather slender, inserted in an open, deep cavity; calyx large, set in a wide, rather deep, slightly plaited basin; the bright red stripes remain imprinted on the fruit after the delicate skin has been removed: the coloring matter penetrating and partially staining the otherwise whitish flesh, which is exceedingly tender and of fine texture; flavor agreeable: quality "very good."

From Charles Kessler, of Reading:—The Speckled Oley—from Oley township, Berks county, Pennsylvania. This Apple is said to be beautiful when in perfection, and usually one-third larger than the specimens sent to us. Size two and a half inches by two and five-eighths; roundish; striped and mottled with red on a greenish yellow ground, and thickly covered with large white dots, most of which contain a russet speck in the centre; stem three-eighths of an inch long, by one-tenth thick, inserted in a very narrow, acute cavity, sometimes russeted; calyx small, set in a shallow, furrowed basin; seed long and of a light yellowish brown color; flesh rather dry and mealy, but with a pleasant flavor; being over-ripe, an accurate judgment could not be formed of its quality.

From Charles Kessler, of Reading:—A large greenish yellow Apple, with a faint brown cheek; roundish, inclining to conical, and somewhat angular; stem short, rather stout, and fleshy at its junction with the branch; cavity acute, narrow; russeted in rays; calyx small; basin moderately deep, not wide,

furrowed; flesh tender, juicy; as the specimens were over-ripe, the quality could not be accurately ascertained.

From Charles Kessler, of Reading:—Newtown Pippin—from Berks county; large; roundish oblong, greenish yellow, with faint broad stripes of red on the side exposed to the sun. Not true to name, and not equal in quality to the genuine Newtown Pippin.

From Mr. Stingluff.—Beautiful specimens of pears, from a tree purchased for the *Catillac*, but which proves to be *Uvedale's St. Germain*. The latter is distinguished from the former in being pyriform; while the *Catillac* is broadly turbinate. Both are valuable only for culinary purposes, and one of them (*Uvedale's St. Germain*) is familiar to us under the name of *Pound Pear*.

From Jonathan C. Baldwin, of Downingtown.—Pears labelled *St. Germain*; which we regard as not true to name. They were not in good condition when received, and we were consequently unable to test their quality. Mr. Baldwin, however, who is a distinguished pomologist, has expressed so favorable an opinion of the variety, that we have drawn up the following description of it, from the specimen he sent us: large; obovate pyriform; greenish yellow, with a brownish red cheek; stem an inch long by one-sixth thick, inserted without depression; calyx set in a deep, narrow, sometimes wide basin; seed very large; flesh yellowish white, juicy; specimens not in a condition for us to determine the flavor and quality.

From Dr. Bertolet, of Oley township, Berks county, Pa., through Charles Kessler, of Reading.—*The Boas Apple*, which was introduced into Oley, about fifty years ago, by the Rev. Mr. Boas, of Reading, from Exeter township, where it is known as the *Kelter*: medium size; roundish oblate; deep crimson in stripes of different hues, with one or more whitish yellow blotches near the base, sometimes only faintly striped with red on a greenish yellow ground; stem very short and thick, inserted in a moderately deep, not very wide cavity; calyx set in a plaited basin variable in size and form, sometimes superficial and wide, sometimes rather deep and narrow; core small; seed very small, plump, acuminate, greyish brown; flesh yellowish white, crisp; flavor pleasant; quality "very good." Said to be a long keeper.

Six resident members were elected. On motion adjourned.

THOS. P. JAMES, Recording Secretary.

Chester County Horticultural Society.

The display of the HORTICULTURAL SOCIETY, on Saturday, the 14th of May, was very good, with a fuller attendance than usual. The display of greenhouse plants by Morris & Co., and by Hartman & Co., exhibited much skill in culture and taste in selection—they were much admired. The display of tulips by Miss Bennett and Mr. Stromberg, in the form of bouquets, were very brilliant. The following display of APPLES shows that with a little care we can have a supply of that valuable fruit the whole year:—Joshua Embree exhibited 17 varieties, J. C. Baldwin 7, Hartman & Co. 6, John James, Jr., 4, Ziba Darlington 8, John F. Ingram 1, a seedling of good keeping qualities and good flavor. Rhubarb by P. Morris & Co., Jonathan C. Baldwin, and John F. Ingram. Messrs. Morris & Co., exhibited a good display of vegetables. This department was not so fully represented as it should have been.

Premiums were awarded—

To Hartman & Co. for the best 10 varieties of *Perlargoniums*.

P. Morris & Co. for the best 10 varieties of *Roses* in pots.

Hartman & Co., for 2d do do

Minerva Bennett, for the best display of tulips.

P. Morris & Co., for the best display of green-house plant.

Hartman & Co., for the 2d do do

Joshua Embree, for the best display of Apples.

P. Morris & Co., for the best display of Vegetables.

P. Morris & Co., for the best three bunches of *Asparagus*.

P. Morris & Co., for the best three bunches of *Rhubarb*.

The following were appointed a committee to superintend the June exhibition, viz:

J. Lacey Darlington, R. B. Taylor, Wilmer Worthington, Jr., J. H. Bell, and A. Marshall; also the following ladies: Miss Sarah W. Haines, Miss C. M. Williamson, Miss Sarah E. Rutter, Miss C. L. Darlington, and Miss Hetty Trimble.

Mr. Elliot Cresson, of Philadelphia, was duly elected a life member.

Mr. Cresson being present, made some practical and useful suggestions before the Society.

On motion the committee were instructed to request Mr. Cresson to deliver an address at the June exhibition.

New Corn Planter.

Measures to secure a patent for the above have been taken by Gardner A. Bruce, of Mechanicsburg; Ill. In this machine, directly behind each furrow share, is placed a hopper, and directly underneath the bottoms of the two hoppers is a 'dropping slide,' extending entirely across the frame, and which has a reciprocating motion given to it by a lever. In the bottom of each hopper are two holes, and each end of the dropping slide has the same, there is likewise through each side piece of the frame a vertical aperture. When the furrow has been prepared for the seed, the dropping slide is operated by a hand lever, so that one of the holes with which it is perforated coincides with another in the side frame, whilst the other hole is directly under one of the apertures in the hopper. In this position a seed drops from the slide through the frame, and into the furrow, whilst, at the same time, a seed is forced from the hopper into the other hole of the slide. The certainty of this process is insured by having, in each hopper, a balance beam, to both ends of which are attached vertical rods, which alternately serve to force a seed from the hopper into the dropping slide; this plan preventing the holes from being clogged, as the rods will clear them. There are two covering shares on each side of the frame, which are attached to a beam moving in sockets, and the tendency that the shares have to be thrown back, is checked by fixing a slotted lever to the beam, and placing in the slot a cross-piece, whose upward motion is determined by a pin, so that the shares are regulated at will, and when necessary they can be made to clear the earth entirely.—[Scientific American.

Apple Tree Borers.

In New England there is no greater pest to the cultivator, than the apple tree borer. In some parts it has destroyed whole orchards. Many persons, in fact most persons, fold their hands in despair, and let the trees die. I have done better by the help of the Horticulturist—having profited by the directions

given by the Editor three or four years ago. These directions are the only ones that I have seen that strike directly at the root of the matter—that is to say, by preventing the borer in a winged state, the last of May and the first of June, from depositing its eggs in the bark of the tree, and thereby laying the foundation of a new brood. The old mode of killing the borers by pushing wires into their holes in the trunk of the tree, is good as far as it goes—but it only goes half way. Since, if you succeed in killing all the grubs in that tree, a fresh set may fly over from your neighbors' trees, as soon as the grubs hatch out, and lay their eggs in yours. The plan recommended by the Editor of the Horticulturist, does the whole business; as many new subscribers whose trees may be infected, have not that prescription at hand, I shall beg leave to repeat it.

First, kill all the grubs in the trunk of the tree, by pushing a wire up the holes as far as possible. Then take a pail—fill it half full of thin soft soap, and stir in enough tobacco water to make it two-thirds full. Having first scraped off any loose bark, next apply this tobacco and soap paint with a stiff brush, to every part of the trunk, and larger part of the limbs—putting it on especially thick at the "crochets," and the base of the trunk—the places where the borer likes best to deposit its eggs. If this is done early in May, I can answer from experience for its efficacy. No borer will deposit her eggs in bark coated over in this way.—[Horticulturist.

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

WINNERS.—By G. P. S. Zimmerman, of Charlestown, Va.—I claim the invention, use, and application of the perforated vibrating table, arranged to a sloping bottom or platform, the parallel saw-like stripes or straw pushers, combined with an oscillating rake and straw beaters or curved prongs, the whole combined and working with the oscillating hinged standard, and suspending straps, substantially as set forth.

I do not, however, claim the invention of a combined threshing, separating, and winnowing machine, but only such parts as are set forth.

WINNERS OF GRAIN.—By S. Briggs & J. G. Talbot, of Sloansville, N. Y.—We claim causing the upper sieve or riddle to vibrate at a greater speed than the screens, as set forth.

BREAKING HEMP.—By Lewis W. Colver, of Louisville, Ky.—I claim the combination of the oscillating beaters, and the spring bars placed above and below the beaters, so that the recoil of the springs after the beater leaves the bars, shall shake out the hemp and clear it of its woody portions, as described.

SEED PLANTERS.—By Isaac H. Garretson, of Clay Iowa—I claim planting corn in check rows, by the planting sides, worked on the cross-bar by hand, in the manner set forth.

GRAIN HARVESTERS.—By T. D. Burrall, of Geneva, N. Y.—I claim first, the additional apron, to convert the usual rear discharge into a side discharge of the cut grain, constructed and arranged as set forth.

Second, the combination of the curved supports and the adjustable journal box piece, to preserve the relative positions of the cogs in the mitre gearing, and at the same time allow of raising and depressing the driving wheel, the gearing, &c., being constructed and arranged as described.

Plows.—By Solomon Horney, Jr., of Richmond, Ia.—I claim constructing the shank hollow in a single piece, with two closed ends, as described, and securing the same to and with the share and beam, by means of the master bolt, and the short bolt for passing through the slot in the top end of the hollow shank, for varying the position of the shank with the beam, and for giving additional security to the fastening of the same, as set forth.

HARROWS.—By William Berlin, of Berryville, Va.—I claim constructing a double frame work of iron bars or straps of metal, and arranging and combining the two together by graduating bolts or adjustable screws and taps, by which means or contrivance, the lower frame can be elevated or depressed, and the teeth or tines, lengthened or shortened in their drag or dip.

WASHING MACHINES.—By C. F. Wilgus, of West Troy, N. Y.—I claim the employment of the revolving feeding net cylinder, in combination with the two sets or circles of rollers, one set of said rollers being allowed to yield when the sack of clothes or other articles, is drawn around the net cylinder, and between the said rollers and made to spring back by means of the springs, which are connected to the rollers, the whole being constructed, arranged, and operated as described, and for the purpose of washing clothes and falling and flocking cloths, as set forth.—[Scientific American.]

CHEESE PRESSES.—By Mills A. Hackley, of Belleville, N. Y. I claim the turning table or its equivalent, in combination with the roller in such manner, that whenever the table is adjusted for turning the cheese, there will be a corresponding adjustment of the roller for facilitating the process of turning the same.

HARNESS.—By James Stanbrough, of Newark, N. Y. I claim the forming of rounds, raises, or rolls, on the different parts of a harness or other leather work, by doubling and stitching together a strap of leather, at its edges, and then binding these edges by a separate piece, and connecting the stitching of such binding, by drawing up and fastening by the side thereof, folds of the strap; and this I claim, whether the single strap only be used for forming a single roll, or a secondary strap be used for forming two or more rolls, as described.

SCYTHE FASTENINGS.—By Alpheus Kimble, of Fitchburg, Mass. I claim the method of securing the blade of the scythe to the snath, by passing its shank through the end of the stationary metal cap, and securing it by means of the upward pressure of the screw, in combination with the claw and bush piece, constructed and operating as described.

BREAKING AND DRESSING FLAX.—By S. A. Clemans, of Springfield, Mass. I do not claim simply the double action of beaters, as that is well known in a great variety of machines for various purposes.

What I claim is the method of breaking and dressing flax or other fibrous substances, by a beater constructed in the manner described, (vibrating on a central axis,) between the faces of which the flax, &c., passes as described, when this is combined with one or two pairs of rests placed in close proximity to the edges of the beaters between which the flax passes, as specified.

Also, in combination with the beater and rests for breaking and dressing, as described, the employment of a pair of rollers each of which is grooved in the

direction of its periphery, and one of which is made to vibrate in the direction of its axis, for the purpose of opening and softening the fibres, as described.

MACHINES FOR DRESSING SHINGLES.—By Joel Tiffany, of Cleveland, Ohio: I claim the combination of parts consisting of the pinions, with the intermediate gears. The levers and joint levers and sections, with the connecting rods, and cam, for the purpose of operating the arms, as described, turning and removing shingles, at the same time, from one side of a reciprocating bed, to the other, and then, when its second face is dressed, throwing it from the machine in a finished state.

Plows.—By Solomon Horney, Jr., of Richmond, Ind.: I claim constructing the shank hollow in a single piece, with two closed ends, as described, and securing the same to and with the share and beam, by means of the master bolts, and the short bolt for passing through the slot in the top end of the hollow shank, for varying the position of the shank with the beam, and for giving additional security to the fastening of the same, as set forth.

SMUT MACHINES.—By H. L. Fulton, of Chicago, Ill: I am aware that a flat plate on the side of the concave has been used; this, therefore, I do not claim; but I claim the circular prismatic shaped brace and concentrator, arranged between each pair of revolving scouring plates, and secured fast to the inner periphery of the case for the purpose of concentrating the grain, and throwing it upon the second scouring plate, and thereby preventing its escape, before it is effectually cleaned from the first scouring plate, directly to the discharged passage, as described. Also, in combination with the revolving dish shaped plates, or beaters, substantially as described, the prismatic ring, for the purpose of concentrating and directing the grain from one beater to the other as described.

SHINGLE MACHINES.—By Simon Ingersoll, of New York city: I claim the spring clipper, operated as described, in combination with the riving knife, for the purpose of insuring the complete separation of the shingle from the block, and, at the same time, throwing it on the lower bed, in position to be carried to the dressing knives, by the next advance of the driver, as set forth.

Caterpillars.

We have long been anxious to ascertain what bird, if any, would destroy the common caterpillar. In a conversation with J. G. Bell, Esq., Ornithologist and Taxidermist, we learn that the Balt. Oriole, (*Icterus Baltimorensis*) will destroy many hundreds per day. This bird removes the head, takes out the semi-fluid portion, leaving the hairy case. The Orchard Oriole, (*Icterus Spurius*) of Audubon, is also a very destructive bird to caterpillars.

Mr. Bell stated that the Downy Woodpecker, (*Picus pubescens*), and the Hairy Woodpecker, (*Picus villosus*) are useful birds to the farmer, as they destroy myriads of the grub or borer in the apple tree. They generally take them out of young trees near the ground.

Mr. Bell has promised, at some future day, to furnish us with an article on Ornithology as connected with agriculture.

We hope our young friends who parade the country in shooting jackets, will reflect before shooting any of the birds we have named above, that he is destroying an individual of, probably, ten times his own importance to the body politic.—*Exchange*.

PENNSYLVANIA FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

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AGENTS.

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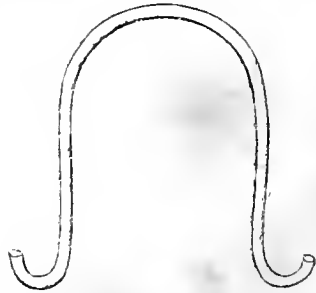
Prize Essay on the Production of Butter,

READ BEFORE THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

[Continued from last number of the Farm Journal.]

It is almost unnecessary to remark that every utensil connected with the dairy ought to be kept perfectly clean and sweet, being well scalded, and subsequently washed out with clean cold water. The milk, being drawn from the cow, should be put into a vessel to cool—a clean tinned vessel is the best for this purpose; it ought not to stand so long, or be allowed to cool so much, as to permit the cream to partially separate; being cooled, it should be strained through a hair sieve into the milk dishes (glass ones are the best.) The depth of milk should not exceed four inches; it is stated that two inches is the most profitable mode. In a dairy maintained at a proper temperature, the cream should be gathered every twenty-four hours; but in very hot weather the milk ought not to stand more than eighteen hours,

at the utmost. The common mode of procuring cream is by a skimmer; others have constructed vessels by which the blue or skim milk is allowed to flow through an orifice in the bottom of the vessel. Recently it has been proposed to use a syphon for this purpose; the ordinary syphon is, however, very troublesome. If syphons ever come into general use, they ought to be formed of the annexed figure.



When constructed with a curved terminal to each leg, the syphon may be carried about, or may be hung up for use at any moment, it being only requisite, in using it, to maintain the leg placed in the milk at a slight degree of elevation above the outer leg. Syphons of this kind have been long in use in acid manufactories.

The processes used for making butter in different districts are much more numerous than is generally imagined; a similar remark applies to the churns used; the varieties of the latter have greatly increased of late years. For the present, I shall confine my remarks to the mode of using the milk, cream, &c., and the proper temperature of churning. The form of the churn will receive subsequent attention.

Some very elaborate experiments on butter-making were undertaken by Professor Traill and the late Dr. Bostock; they were published in the 'Highland Transactions.' The writer of this paper was made acquainted with many of these results by one of the experimenters, now deceased, and subsequently tested them on a working scale. Owing to removals, and the lapse of time, the notes are lost or mislaid; he, however, distinctly recollects that in all instances but one the products, on an ordinary routine, agreed remarkably with those made by the gentlemen alluded to.

One series consisted of "the comparative quantity of butter yielded by the following:

1. Sweet cream churned alone.
2. Sweet milk and its cream churned together.
3. Sour cream churned alone.
4. Sour milk and its cream churned together.
5. Scalded or Devonshire cream churned alone.

On the 24th of May, 1807, the milk of four cows was drawn in the same vessel, passed through a strainer, and then divided into five portions of six English pints each, which were placed in similar basins of earthenware, in a place, the temperature of which ranged from 55° to 60° Fahr.

Monday, 25th.—The temperature of the air was very hot, 76°; but that of the milk-house, by constant evaporation of water, was kept about 60°.

Tuesday, 26th.—Thirty-nine hours after the milk had been drawn from the cows it was removed from below the cream of No. 1 and No. 3, by a syphon; the cream from No. 1, and the milk and cream from No. 2, were immediately churned in glass vessels.

No. 1.—Sweet cream churned alone. From previous trials it was found that the addition of cold water to thick cream facilitated the separation of the butter; half a pint of water was added to the cream, the temperature of the mixture at the commencement of churning was 62°. In fifteen minutes butter appeared in grains; the churning was continued for twelve minutes longer, or twenty-seven minutes in all, when the temperature was found at 70°. The butter was collected, but from the warmth of the weather was very soft. It was put into cold water until the next day, when it was worked and washed in the usual way, and weighed 1386 grains. It was of a good colour, and perfectly well flavored.

No. 2.—Sweet milk and its cream churned together. The mixture of sweet milk and cream was churned at the same time; though cold water was added after one and a half hours' churning, no butter was seen. The churning was continued three hours without obtaining butter.

No. 3.—Sour cream churned alone. On Thursday, the 28th May, the cream of No. 3, which had been separated on Tuesday, and placed in the milk-house, was now slightly acid, and was churned after half a pint of cold water had been added to it. In twelve minutes butter appeared; and in eight minutes more had united into one mass. During the churning the temperature of the cream had risen from 54° to 63°. The butter when well washed and worked, weighed 1756.5 grains; the color and taste were good.

No. 4.—Sour milk and its cream churned together. On the same day, 28th May, the milk and cream churned together, and half a pint of cold water was added. It was full fifty-seven minutes before any butter appeared, and before the churning appeared to be completed one hour and fifty minutes had elapsed; showing clearly that more time is required to churn milk and cream together than to obtain the butter from cream alone. The butter was diffused in small grains, and when washed and worked as long as any color was communicated to the water, it weighed 1968 grains; color paler than the last, but of good flavor.

No. 5.—Clouted cream churned alone. On Tuesday, the 26th, the milk and cream of No. 5, were placed in a vessel of warm water until the temperature of the milk rose to 156°, a Devonshire dairy-maid assisting in the operation. The milk was drawn from below the cream by a syphon, the latter being kept cool until the following day, when it was churned.

It was ascertained that by churning the milk of Nos. 1 and 3, a few more grains of butter could be

obtained on some occasions, but on no occasion from No. 5, so completely does the scalding process separate the butyraceous matter from the milk. The butter of No. 5, when well worked and washed, weighed 1998 grains. It had a rich yellow color, and tasted agreeably.

Similar experiments were repeated, the result of which was, that the largest amount of butter was produced by the Devonshire method; the next in quantity, by churning the milk and cream together when a little acescent; the third in quantity was afforded by cream kept till it was slightly sour. The smallest quantity was obtained from sweet cream; but on no occasion was butter obtained by churning sweet milk alone.

In order to decide on the keeping qualities of the butter obtained by the four processes previously detailed, samples were exposed to the free action of the atmosphere.

No. 1 was always found to remain longer without any rancid taste than the other kinds.

Nos. 3 and 4 were nearly on an equality—if any difference, it was in favor of No. 3.

No. 5 became rancid more quickly than No. 3 and No. 4.

When salted for keeping, rancidity appeared in about the same order, commencing in No. 5, or the butter from scalded cream; next in No. 4, from some milk and cream, then in No. 3, or sour cream; and lastly, in No. 1, obtained from sweet cream. The rancidity was supposed to arise from varying proportions of casein; and on instituting experiments to ascertain this fact, it was found that casein assisted in preserving its freshness.

In order to ascertain the effects of overchurning, the cream of six pints of milk was separated by a syphon, and churned in a glass vessel. The butter was formed in about half an hour; but the churning was continued for half an hour longer, when the butter had lost its fine, yellowish, waxy appearance, and had become pale and soft, while very little liquid remained in the churn. This butter could not be washed and worked until it had remained some hours in cold water, being so exceedingly soft when taken out of the churn. After washing it was pale, rather soft, and weighed 2566 grains, which was evidently beyond the due quantity, when compared with the other experiments on the same quantity of milk, which gave the following results:—

No. 1. The sweet cream overchurned yielded 2566 grains.

No. 3. The acid cream duly churned yielded 2187.5 grains.

No. 4. The acid milk and its cream duly churned yielded 2397.5 grains.

No. 5. Scalded cream duly churned yielded 2671 grains.

The butter of No. 1 tasted insipid, never became firm, and soon turned rancid. It was found to yield a very unusual quantity both of casein and watery fluid, which could only be separated by melting the butter.

It is a common opinion in some districts, that by adding hot water to the churn, more butter is obtained than by using cold water. Experiments made for the express purpose did not show that the weight increased very much, and it was attended with a perceptible deterioration in quantity, giving it generally the appearance of overchurning.

The results of the experiments above detailed are—

1st. That the addition of some cold water, during churning, facilitates the process, or the separation of

the butter, especially when the cream is thick and the weather hot.

2d. That cream alone is more easily churned than a mixture of cream and milk.

3d. That butter produced from sweet cream has the finest flavor when fresh, and appears to remain the longest period without becoming rancid.

4th. That scalded cream, or the Devonshire method, yields the largest quantity of butter; but if intended to be salted is most liable to acquire a rancid flavor by keeping.

5th. That churning the milk and cream together, after they have become slightly acid, is the most economical process for districts where butter-milk can be sold; whilst at the same time it yields a large amount of excellent butter.

The preceding experiments are instructive as showing the most judicious form in which milk and its products ought to exist previous to churning. They are, however, defective in one important particular, viz: the effect of temperature on churning; for this I must refer to the experiments of Dr. John Barclay and Mr. Alexander Allen, commenced on the 18th August, 1823:

1st Experiment.—Fifteen gallons of cream were put into the churn at the temperature of 50°, the weight per gallon having been previously ascertained to be 8 lbs. 4 ozs. By agitating the cream in the usual manner for the space of two hours, the temperature rose to 56°; at the end of churning, being four hours from the commencement of the operation, the temperature was found to be 60°, or 10° higher than at the commencement. The quantity of butter obtained in this process was 29½ lbs. avoirdupois, or nearly 2 lbs. butter for each gallon of cream put into the churn. The butter was of the best quality.

2d Experiment, 26th August, 1823.—Fifteen gallons of cream were put into the churn at the temperature of 55°, the weight per gallon being 8 lbs. 2 ozs. By agitating the cream, as formerly, for one hour and a half, the temperature rose to 60°; at the end of churning, being three hours and fifteen minutes from the commencement of the operation, the temperature was ascertained to have increased to 65°, or 10° higher than at the commencement. The yield of butter was 29 lbs. 4 ozs., of good quality, not sensibly inferior to that obtained in the former experiment.

3d. Experiment, 29th August, 1823.—Fifteen gallons of cream were put into the churn at a temperature of 58°, the weight per gallon being 8 lbs. 2 ozs. At the end of an hour's churning the temperature had risen to 63°, and at the end of the process, which lasted three hours, the temperature was found to be 67°, or 9° higher than at the commencement. The quantity of butter obtained was 28 lbs., and was slightly inferior in quality to the butter produced in the two previous experiments.

4th Experiment, 4th September, 1823.—The same quantity of cream was employed as in the former experiments, the temperature being 60°, and the weight per gallon 8 lbs. 1 oz. During the process the temperature increased as formerly, and at the end of three hours, when the operation was finished, it was ascertained to have risen to 68°. The quantity of butter obtained was 27 lbs., of a quality similar to that obtained in the last recited experiment.

5th Experiment, 9th September, 1823.—A like quantity of cream was used at the temperature of 66°, and the weight per gallon 8 lbs. The churning occupied two hours and a half, at the expiration of which the temperature was found to have risen to 75°, being an increase of 9°. 25 lbs. 8 ozs. of butter

were obtained by this experiment, of a character much inferior to that produced in any of the former experiments, being soft and spongy

[TO BE CONTINUED.]

To Preserve Eggs.

Some of your correspondents inquire about the best method of keeping eggs fresh; and as we have a plan here which I have not seen mentioned in any of the replies which have been given to these inquiries, I send it to you, particularly as I find it better than any I have seen mentioned:—Take half inch board of any convenient length and breadth, and pierce it as full of holes (each 1½ inch in diameter) as you can, without risking the breaking of one hole into another—I find that a board of two feet six inches in length, and one foot board, has five dozen in it, say twelve rows of five each; then take four strips of the same board of two inches broad, and nail them together edgewise into a rectangular frame of the same size as your board; nail the board upon the frame, and the work is done, unless you choose, for the sake of appearances, to nail a heading of three-quarters inch round the board on the top; this looks better, and sometimes may prevent an egg from rolling off. Put your eggs in this board as they come in from the poultry-house, the small end down, and they will keep good for six months, if you take the following precautions:—Take care that the eggs do not get wet either in the nest or afterwards; (in summer, hens are fond of laying among the nettles or long grass, and any eggs taken from such nests in wet weather, should be put away for immediate use;) keep them in a cool room in summer, and out of the reach of frost in winter, and then, I think, the party trying the experiment will have abundant reason to be satisfied with it.

I find there are some in my larder which I am assured have been there nearer eight months than six, and which are still perfectly fresh and good; in fact, it is the practice here to accumulate a large stock of eggs in August, September and October, which last until after the fowls have begun to lay in the spring. If two boards are kept, one can be filling, and the other emptying at the same time. This is an exceedingly good plan for those persons who keep a few fowls for the supply of eggs to their own family; but would, perhaps, not do so well for those who keep a large stock of hens, as it would take up too much room.

I have endeavored to account for the admirable way in which eggs keep in this manner, by supposing that the yolk floats more equally in the white, and has less tendency to sink down to the shell, than when the egg is laid on one side; certainly if the yolk reaches the shell, the egg spoils immediately.

Will some of your correspondents favor me with their opinion?—[English Agricultural Gazette.

T. G.

Indiana State Fair, 1853.

This is to be held at Lafayette, on the 11th, 12th and 13th days of October. This point is accessible by canals and railroad. Among the premiums offered are six silver pitchers, valued at \$33 each; thirty-five silver cups, valued at \$15 each; seventy-five silver cups, valued at \$10 each; thirty sets of tea-spoons, valued at \$5 each; and a large number of premiums, consisting of cash, agricultural works, books, diplomas, &c. The competition for the silver pitchers will be among the cultivators of wheat and corn, and the owners of cattle, horses, jacks and hogs.

New Evergreen.

We have received, enclosed in a letter from our friend John King, McKean county, Pa., a specimen twig of the Evergreen shrub, about which there has been considerable enquiry in the Farm Journal. It is without doubt the American Yew, *Taxus Canadensis*. Its usual height is two to four feet; leaves half an inch to three-fourths in length, smooth, entire, green on both sides, narrowed at base to a very short petiole. It is more straggling in growth, and we think not so handsome either in color or habit, as the English Yew, *Taxus Baccata*, which retains its greenness through the winter much better.

This specimen should have been acknowledged sooner, but the letter was accidentally mislaid.

Strawberry Question.

We invite attention to the article in the present number, on what has been very undeservedly magnified into "*one of the great questions of the day.*" We have entertained these views for many years. The high source from which the article emanates, entirely supersedes any remarks of ours. This "strawberry question," so called, has always seemed to us one of the *most simple*, a mere matter of fact, and it has been a matter of wonderment, that so much should have been said and written, and such formidable resolutions passed, on what is at last comprised within the limits of a mere nut-shell.

Tall Clover.

We have been furnished with a sample of clover, grown on the farm of Mr. Wickersham, near Philadelphia, which, on measuring, we find to be three feet in height.

This indicates a deep soil, and good farming. We presume there must be a subsoil-plough somewhere in that neighborhood.

Warren County Agricultural Society.

A Society with the above title, has lately been organized in Warren county, Pa., "auxiliary to the Pennsylvania State Agricultural Society," and with the object as stated in the first article of its constitution, to foster and improve agriculture, horticulture, domestic arts and manufactures. A constitution and bye-laws have been adopted, and officers elected as follows:

President—Stephen Littlefield.

Vice Presidents—[Forty-four in number.]

Secretary—Patrick Falconer.

Treasurer—James Younie.

Northampton County Agricultural Society.

This Society have agreed to hold its annual exhibition in Easton, on the 5th, 6th and 7th days of October next.

Hints about Harness.

For several years past, we have adopted the following plan of treating carriage harness, with so much comfort and success, that we have concluded to recommend it to you for working and carriage harness.

The whole thing may be comprised in a few words. With hot water, soap, brushes, and scrapers, make your harness perfectly clean. Next saturate with oil; lastly, a weather-proof elastic polish and blackening.

For your information, we detail to you how to go about accomplishing these results. Select some afternoon with a prospect of a fair day following. Take your harness and take it to pieces, as far as you can unbuckle it. Put them into a tub or barrel, and pour boiling soap suds over them, and let them stand all night. In the morning, take a stiff brush, or corn cobs, or something else of the same sort, and with a smooth board in place of a wash-board, with fresh water and soap, rub the coat of grease and dirt off each side of the leather. Sometimes it is necessary to use a dull old knife to scrape with. Pass each strap through a second clean water, and hang up on a line, exposed to the sun. As soon as they begin to dry, begin to oil them. Neatsfoot oil is the best, but fish oil will do very well. Make a brush by rubbing some flannel round a stick, and tying it with thread, dip this in the oil, and pass over both sides. As it dries in, go over over them again and again, until they will absorb no more oil. Let them stay out over night.

In the morning, if they are all soft and pliable, you may proceed to apply varnish. If not, put on more oil until they do get soft and pliable.

The polish is made as follows:—Take a pint of fish or neatsfoot oil, add four ounces of beeswax, four ounces clean beef tallow, one ounce rosin, and one ounce of lampblack; melt—when melted, add about two table-spoonfuls of turpentine, and with flannel cloths commence rubbing the harness both sides, draw the straps through and through the flannel. The polish must be applied warm as the hands can bear it. Let your harness hang out one night. Take warm water and soap and wash all the black off, which will come off with sponge or cloths. Hang up, and in an hour or so, you can buckle together again, and it is fit for use. You will now have soft harness, with a dull shiny jet black surface, which will keep so for a whole year, if you put oil enough on them to render them as soft as woollen cloth. They will retain this dull shiny black all summer, and mud will never stay on long after it is dry.

Any person who will treat his harness so, once a year, will never regret the trouble.

If they need repairing, either do it yourselves, or have it done before the spring work comes on.—[Exchange.]

Agricultural Exhibition.

The Perry County Agricultural Exhibition will be held at Bloomfield, in that county, on October 5th, 6th and 7th. It is expected that it will be a very interesting affair.

Beaver County Agricultural Society.

At a meeting of the Board of Managers, held at the Court House, in Beaver, May 27th, a premium list was adopted, and the 20th and 21st of September, was fixed upon as the time for holding the annual exhibition, and in the town of Beaver.

For the Farm Journal.

The Mechanical Effects of Lime.

I am happy to find that the attention of the farming community is being turned to the important subject of the effects produced by lime, when used as a fertilizer, and that my letters published in the *Journal*, have been instrumental in awakening such interest, and calling into the field such able commentators on this most important subject.

In the March number, I endeavored, to the best of my poor ability, to explain my views in regard to the generally received opinion of the mechanical effects of lime. I perceive that the able writer whose article appeared in the May number, over the initials J. H. B., has not fully understood the position taken, or intended to be taken by myself on the subject. My readers will excuse me for again going somewhat over the same ground, when I say to them, that I am convinced, that the commentator is possessed of more than ordinary perspicacity, and that my meaning must be very obscurely expressed, else he could not have fallen into so much error.

By reference to the article in question, it may however without difficulty be perceived, that I have drawn a line between the chemical, and the purely mechanical effects of lime. This distinction is very important, and must be constantly borne in mind. I do not include among the mechanical effects of lime, such as are of a secondary character. For instance: That lime, when judiciously applied increases the fertility of the soil, and such increased fertility causes the soil to contain a larger proportion of vegetable matter undergoing *eremacausis*, as well as carbon, and thus indirectly renders the soil more pulverulent. I do not allude to any but direct mechanical effects, produced by the force exerted by the lime. That the force should be produced by some chemical property of the lime is no objection, provided it is exerted directly, and not as a secondary result, and that the effect be mechanical.

The learned commentator seems to have imbibed the impression (doubtless owing to my clumsy manner of expressing my meaning) that the carbonic acid to which I have attributed the mellowing of the soil, is the product of the vegetable portion of the soil. But such is not my meaning when rightly interpreted. I have endeavored to express myself as plainly as possible, as to the derivation of this acid from the carbonate of lime. My intention was to be understood to say that, Caustic lime applied to the soil speedily becomes saturated with some acid. If the soil contains any vegetable acids, they speedily combine with the lime. If the soil contains any considerable quantity of manure or other vegetable matter undergoing decay, it will obtain carbonic acid from that source. If the soil is not too compact, it will obtain some from the atmosphere. Lime should, however, be applied as a carbonate, which can easi-

ly be effected by spreading it on the surface sufficiently long before ploughing in. The acids which are formed from the decomposition of the vegetable matter contained in the soil, are capable of decomposing the carbonate of lime. These acids are soluble, and by the aid of water are capable of penetrating all portions of the heaviest soil. If a heavy soil contains carbonate of lime, the vegetable acids will liberate the carbonic acid, and it is the coming into separate existence of this carbonic acid, occupying, as it will, much more space, that disintegrates the soil. I do not pretend to say that this carbonic acid will remain in the soil, in an uncombined state any considerable length of time. When a loaf of bread is baked, no carbonic acid remains in the cells formed by the fermentation, but the cells remain. The great object has been attained, the tenacity of the soil has been overcome, and generally it will not become hard again, until the crop is so far ahead as not to be much affected by it. Besides which, in warm weather, this phenomena is constantly going on to some extent, provided the ground is not too dry.

Professor Mapes pretends to make a distinction, between the mechanical effects of lime on the different sandy soils, and says, that when the grains of sand are round, it renders the soil more loose. He attributes the mechanical effect to a chemical action. If any such chemical action could take place, it might be a matter of opinion as to what would be the mechanical effect: But I contend that the learned Professor is in error in this particular. He attributes it to the action of the lime, on the siliceous, and the consequent corroding of the polished surface of the sand. Here we are at issue. I contend that no such chemical phenomena will take place. No chemist has (to my knowledge) been able to demonstrate that caustic lime at the ordinary temperature, will combine with siliceous. True, lime in sufficient quantities, made into a cement with sand, will become hard and cause bricks and stones to adhere together, but when this mortar is subjected to the action of any of the feeble acids, which will make soluble salts of lime, it may be entirely separated from the siliceous, and the latter will be precipitated. It has been said that water in which lime is held in solution, being passed through a long column of sand, will deposit the lime and pass out pure; but no one has pretended to say, that it will be found combined, and a silicate of lime be formed.

The learned Professor also distinctly asserts, that some sandy soils are loosened, and some are rendered more compact by the application of lime, and attributes this difference to the shape of the particles of the sand. He also without reserve lays it down distinctly, that sulphate of lime (plaster) renders a sandy soil more compact by means of its property of attaching particles. When we reflect on the small proportion in which plaster is applied to the soil, and

the imperfect manner in which it is pulverized, can any one believe that it could be omnipresent to stick the sand together?

The learned commentator does not take the same ground with Professor Mapes, and whilst in the words of the poet, he says to me—

Be silent always, when you doubt your sense;
And speak, though sure, with seeming diffidence.

Pope.

he in an off handed way, disposes of us both. Does he contend with his protégé that lime will corrode the sand, and combine with it so as to form silicate of lime, and that the consequent roughness will hinder the sand from packing? No! He takes a new ground, and advances a dogma of *his own* creating, quite independent of the learned Professor, for whom he feels so much sympathy. He says:

"Now if Mr. Browne is a chemist (as we suppose 'he is, from the fact that he advances original theories on obscure chemical subjects,) he will certainly 'recollect the fact that a peculiar characteristic of that class of compounds called silicates, is that a 'large quantity of a previously formed silicate, possesses the property of combining with an almost 'indefinitely small quantity of a new base (such as 'lime,) forming a double salt."

It is to this cause, he refers for his mechanical power, which he says will lighten the soil.

Before commenting on this theory, I will try to set the commentator right in regard to the suppositions he has advanced touching myself. I am willing to own up, that I had at one time of my life, the presumption, to write myself down a chemist, and after it was written—Geo. B. Browne—*Eleve de Robiquet, Fabricant de produits chimiques*—was wont to survey it with considerable complacency.

But that was twenty years gone. When I did thus presume, I was fresh fledged from the world renowned laboratory of Robiquet, in Paris. I had made preparations for some of the then greatest chemists in the world. Being at that age at which men know least of themselves, I may have been excusable, for somewhat falling into the same ludicrous error with the old colored gentleman, who conceited that he and his master, had painted a picture: Sambo ground the paint, and massa daubed it on the canvass. That day has gone by, and I no longer conceit that I am a chemist. I am behind the age, and am constantly made to feel my inferiority, when brought in contact with such able gentlemen as the learned commentator. I do not pretend to be a chemist, but only to have a sufficient insight into the science, to issue visionary theories, that the more learned may have an opportunity to refute them. This strange fancy of mine, works a public good, for it draws into the arena more able writers, whose diffidence might otherwise deprive the community of the benefit of their labors.

After this candid exposition, and disavowal, my

readers will not be astonished, when I say to them, that I do not recollect hearing speak of any such fact.

But still we set it down as a fact, without further inquiry or comment. In the first place, while every reader will be ready to acknowledge the masterly manner in which the commentary is written, and that it bears within itself the evidence of being the production of no ordinary intellect, but of one skilled in the art:—yet as the author has not lent the weight of his name to his production, it must stand or fall on its own merits, and can derive no strength from the gentleman's ipse dixit. No authority is quoted. Here again we are at fault.

Let us see what the learned commentator has really put forth in these few lines. He alleges that the silicates (aliter dicta) the silicate of potassa, the silicate of soda, &c., are capable of combining at the ordinary temperature with *indefinitely* small quantities of lime or any other base, and that the result of this combination is a double salt. If such is the case, it is indeed a peculiar characteristic. Let us understand the length and breadth of this assertion, which seems to be the keystone to my hopes to any reputation as a chemist, at least in the opinion of the commentator. If Mr. Browne is a chemist he will recollect this fact, if he is not, he will not recollect it. If he does not recollect it he is no chemist.

A previously existing silicate is capable of combining at the ordinary temperature with any and every proportion of lime or any other base, and that any and every of these combinations will be a double salt, and the double salts thus formed, will be more or less soluble, their solubility depending on the proportion the silicic acid bears to the new base. We are not told whether the solubility increases or diminishes with the increase of silicic acid.

What is a double salt? To answer this question we must define a salt. As silicic acid is an oxygen acid, we need only consider such salts as are formed by the combination of an oxygen acid with a base. A salt of this character is a compound of an electro-negative bi elementary compound, such as the compound of one atom of silicem with three atoms of oxygen, and known as silicic acid, and a bi elementary electropositive compound such as the compound of one atom of potassium and one atom of oxygen, known as potassa. The former is an acid, the latter is a base. This class of bases has the property of neutralizing such acids as silicic acid. This compound is the silicate of potash. SiO_3K .

A double salt is formed in two ways, an example of one of which we have in Rochelle salts. Tartaric acid is a bi basic acid, or in other words, two atoms of water, are essential to its existence. Its salts formed with one atom of a base are sour, and upon examination are found to consist of one atom of tartaric acid, one atom of the base and one atom of water.

By some chemists it is considered a tartrate of potash and water. By the addition of an equivalent of soda, Rochelle salts is formed, and it is found to consist of one equivalent of the tartaric acid, one of potash and one of soda. You perceive, therefore, that the potash expelled one equivalent of water, and the soda the other. Owing to this peculiarity which is not confined to tartaric acid but belongs to many of them, it is said to be bi basic.

Double salts are formed by salifying two equivalents of two distinct bases, one equivalent of each with two equivalents of the same acid. The acid employed in this case is a monobasic acid, such an acid only requires one atom of water as essential to its existence. Such double salts may be separated by crystallization, provided they are unequally soluble. They would not be considered double salts, except that they display, when together, some attributes which are not common to them when alone. Silicic acid is an acid which belongs to neither of the two described classes, but belongs to quite a different one.

Sulphuric acid, telluric acid, stannic acid, arsenic acid, silicic acid, &c., do not require any water, and may be obtained in what is called the dry state. In this dry state they display very feeble acid qualities, and do not display any affinity for the bases except at high temperatures. Silicic acid is not bibasic, and consequently a previously existing silicate cannot combine with *any* base presented to it so as to form a double salt. A double salt may be formed by fusing together two previously formed silicates. The silicate of potash for instance not containing more acid than is necessary for its own combination, cannot take into combination any other base. Such might not be the case were the salt already formed a bi silicate, or a sesquisilicate. But with this we have nothing to do, as they are not the salts mentioned by the commentator.

But the learned gentleman says that a new base such as lime will combine in any (indefinite) proportion. This is contrary to the theory of definite proportions, and although I have great respect for the gentleman's opinion on the subject, must demur.

The learned gentleman says that the addition of lime to these previously existing silicates, will cause a double salt to be formed whose solubility depends entirely upon the proportion of the silicic acid to the new base.

The silicate of potash and the silicate of soda, I presume, are the most important ones found in the soil, and of them we will speak more particularly. They are either of them soluble in hot water, but sparingly affected by cold water. So likewise the double salt made by fusing them together. If we make a glass of the following composition

Potash	-	-	-	100
Silex	-	-	-	100

we will have a glass that will not at the ordinary

temperature be stable, but will draw the moisture from the air, and the result will be, that a tumbler made from such glass will, after remaining in the air some time, be found to contain carbonate of potash in solution. If, on the contrary, we make a glass compounded of

Potash	-	-	-	100
Silex	-	-	-	100
Lime	-	-	-	100

we will have a glass that will be unalterable in the air at common temperatures.

It is for this reason that lime (or the oxide of lead) has been found indispensable as an ingredient in glass, at least so says Dumas, vol. 2, p. 557.

Some of the felspars contain no lime, some of them contain lime, and yet the latter are not any more soluble than the former.

In conclusion, I feel greatly flattered that so highly gifted a critic should have reviewed my letters on lime, and has not found more defects. I had not expected as much for them.

As to the parental advice contained in the closing part of the commentator's article, he will accept my thanks. I will endeavor in future, to be more meek and modest in my address when speaking of the learned. Much excuse should however be made for one, who has not had the advantages that such gentlemen as Professor Mapes and the learned commentator have no doubt enjoyed, and his rude speech, and strong language should not be misconstrued into boastful arrogance.

G. BLIGHT BROWNE.

Gwynedd.

The following article from one who has long been a correspondent of the Farm Journal, was accompanied by a letter informing us of her removal to Adrian, Michigan. While we regret to lose so *fair* and agreeable writer, as well as close observer, from our own State, we are pleased that she intends still to continue favoring us occasionally with her observations on Agricultural and Horticultural matters in that new region.

For the Farm Journal.

Transplanting of Trees.

MR. FARM JOURNAL:

It so frequently happens in these days that science parades some new and indisputable discovery in natural philosophy, which every "old superstitious farmer and his wife" at once recognized, as a *whim* of their grandparents, that it is a very nice matter to determine where old sayings differ from scientific truth.

Very many unlearned persons will tell you that in transplanting trees and shrubs, you should be careful to place towards the North, the same side of the tree, shrub or plant, which had looked Northward in the former situation.

Science informs us, that the magnetic current, which is the life of nature, passes always around the earth in the same direction; that consequently the trees growing by its influence, are accustomed to the tide of its current, so that if turned, they do not receive it in their accustomed manner, and cannot thrive until they have accommodated themselves to receive the subtle but mighty influence, in their new position.

In this as in unnumbered instances science confirms the unwritten tradition of long observation—for it is a fact that trees do thrive better if their original positions with respect to North and South, be carefully preserved.

Let Horticulturists experiment and observe the result.

LYDIA JANE PEIRSON.

For the Farm Journal.

Rape or Colza. *Brassica Campestris*.

Rape Seed is not only an object of the greatest importance and value, wherever it is raised for the sake of the seed, but is likewise extremely valuable as green food for cattle and sheep, in the fall or spring, or cured for hay for winter.

The Colza or Rape is a plant which requires by preference, a strong soil, although it will come well on good sand or gravelly loams, besides careful cultivation.

In Belgium, and the northern parts of France, where it is raised in great abundance, it enters into the regular rotation on all good heavy loams, and is thought to be one of the best preparations for wheat, owing to the tillage of the soil, the manure applied for it, and the care taken to keep it clear of weeds.

The ground should be ploughed in the fall and in the spring, and again a short time before sowing, and well manured. Then the seed should be sown very thin in drills, and harrowed in in *June* or *July*. As the plants come up, they should be weeded and thinned out, a foot apart. A superior mode is to sow the seed broadcast, on a good rich seed bed, prepared on purpose. When the stubble of any grain crop has been cleared off by the harrow, the land well manured and ploughed to a good depth, the plants are brought out, and set out as cabbage plants are. This can be done the latter end of September, or in October, either by the dibble and by hand, setting them out in every respect like the plants of cabbage, in rows two to two and a half feet wide, and one foot in the row; or to save much time, labor and trouble, they can be put in furrows one foot apart, after the plough, taking care to put them up right in the furrow, and to cover them by the return of the plough, leaving the leaves above ground, and after the piece is finished, going over it to dress all plants that might be covered too deep, which can be done

by a man walking along the furrows and pressing his foot against the plant, or with the hoe. The intervals between the rows should get a hoeing, or the cultivator run in, or a small plow sent through, to give them an earthing up, killing the weeds at the same time, which should be done as late in the fall as the weather will permit, in November or December. Thus they will remain all winter without injury from the frost.

In spring, they should have the cultivator run between them again, and weeded, or another slight earthing given them, which will greatly strengthen the plants.

The quantity of seed to be sown, should be from five to eight pounds per acre; and this should be sown in the bed or in the rows evenly. It is a great advantage, that the cost of the seed is so trifling in proportion to the value of the crop.

It is ready to cut and reap when the upper branches turn brown, which will be in June or July. Be sure not to let it be too ripe, for if the pods be too dry at reaping, they will shed the seed in the field, and cause much loss.

It can be reaped in the same manner as wheat, but the hand fells should be laid singly and light upon the stubble, behind the reapers, and thus it should lie without stirring, until it is ready to thresh out, which will be in a short time, particularly as generally at that time, the weather is dry and warm.

When it is ready and perfectly dry, prepare a floor in the middle of the field, by levelling the ground, on which should be spread a large muslin cloth, twenty to thirty feet square; spread the rows round, and thrash round. One man or a boy to spread before the thrasher, and another to turn; or it can be thrashed by a thrashing machine, in this case taking care, if the seed is intended to be thrashed on the barn floor, to remove the plants on a large sheet spread on the wagon, to prevent loss of seed, by the jolting and shaking of the wagon.

The seed can then be stored in a dry and airy granary until it is sent to be sold or crushed.

The Rape in good ground, well treated, does not fail to make strong stems and succulent leaves, so that by the middle or latter end of November, it will be strong enough to bear pasturing; then turn in the sheep, but take care they do not eat but just the leaves, which they will crop first, not suffering them to touch the stalks, as that would be injurious to the plants. This will form one of the best pastures for your sheep, if you keep any, and will make them fat and in good condition; or the leaves can be gathered for hogs or cattle, but I do not advise by any means to turn in horned cattle or hogs, for the damage they will do to the stalks. The only safe stock to turn into Rape, in my opinion, being sheep.

The produce of an acre of Rape, will be according to the condition of the land, management and care,

from twenty bushels upwards to fifty, which will command from three and a half to four dollars a bushel, in Philadelphia, New York, Boston, or Baltimore. The yield will be materially affected by the care given to it in thrashing it properly. A very full crop will be from fifty to sixty bushels, and upwards of eighty bushels have been and are raised frequently in Flanders.

Great advantage may be derived from cultivating it in the following manner:

Take half an acre of good land, or make it so by manuring, and work it a little better than ordinary land, or as you should your garden. At mid-summer, (June or July) sow on this half acre, thirty pounds, or two pecks of Rape seed—this will produce a plentiful crop, as few grains will miss; let them grow until the middle of September; take eight or ten acres of wheat or oats, or early corn; plough the stubble, and let it lie a month or six weeks to rot, then plough it again; if the land has been manured previously, it will thus be in good condition.

Begin at one side, plough a furrow, set the plants in the furrow, at the distance of a foot, leaning against the side of the furrow; set the plough and make another furrow, at two feet distant from the first, and in returning it will cover the first furrow planted, and continue so until the whole field is set.

If the land, as I suppose it is, is good, i. e. has been properly manured for the previous crops, wheat, oats, &c., there will be no occasion to manure it now, but if not, have your manure laid in heaps, and throw a little at the root of every plant, a handful will be sufficient; or, which is preferable, by throwing a handful of guano, previously well mixed with four times its bulk of earth or a good handful of any good chemical fertilizer, at the foot of every plant, the produce will be large, and the seed of good quality; in transplanting it will tell all the better in the crop, to roll the roots of the plants in plaster of Paris, or ashes, or both mixed.

When the Rape is reaped, then sow turnips; thus three profitable crops can be got out in two years from the same piece of land, and the two last will improve your land.

As observed above, Rape on land makes one of the best preparations for wheat, but in this latter instance, I prescribe a crop of turnips after it, if following probably wheat, or at least a grain crop.

The above is the management of *Winter Rape*; there is another variety, called *Spring* or *March Rape*—this is cultivated and handled in every respect as the former, with this difference, that it is sown early in the spring, March or April; hence its name, *Spring* or *March Rape* or *Colza*.

It does not yield quite so large a produce as the *Winter Rape*, but as it can be sown in the spring, and harvested at the latter end of the summer, or early fall of the same year, it thus has great claims

to our attention and care. It requires the same quantity of seed as the *Winter Rape*.

The Rape plant is not only of great value in the economy of the farm, as one of the best plants for fodder, as after thrashing the seeds out, the plant is valuable, and yields a large quantity of nutritious fodder, relished by all kinds of stock, but it is as invaluable as a plant yielding one of the best and most prolific of all oleaginous seeds, that is to be considered and employed, and must attract our most earnest and diligent attention, besides the cultivation of it being, as observed above, a good preparation of the land for cereal or grain crops.

The Rape is likewise extremely valuable for the residue or cake left after expressing oil from the seed, which is used extensively for feeding and fattening cattle. It forms likewise one of the most powerful manures, being extensively used in England and other countries, and the effects of it are as immediate and powerful as the best and most concentrated manures hitherto known. It is as immediate and powerful as guano, with this difference, that it benefits after crops more than guano does. As a feed for cattle, it cannot be surpassed in its fattening qualities; pound for pound it has a greater effect than the fresh seed itself.

It is in the manufacture of oil from its seeds, that it deserves to have a distinguished place among the profitable crops, profitable not only from the pecuniary advantages, derived directly from its cultivation, for in supposing that only a minimum crop of twenty bushels should be raised, still, as the price is generally nearer and sometimes over \$4, than \$3½; such a low crop even at \$70 gross per acre, is certainly no despicable figure, when taken into account that the value of this fodder will go nearly to pay the expense of its cultivation, but the manufacture of its seeds into one of the best and most valuable oils, gives it claim to great preeminence, by the great services it thus renders to agriculture, and to manufactures.

The Rape Oil is one of the most valuable oils known in the arts of manufactures; at once serviceable for burning, eating, fulling, for the tanner, for the soap boiler, for machinery, &c., &c.

This oil used for machinery, properly prepared, does not gum as other oils do.

Already has the attention of government been directed to it, to supply our light-houses on the coast, with a good burning oil, as fish oil is constantly raising in price, and whale and sperm fish getting scarcer every year, and particularly should it happen, in the natural course of events, that the price of fish oils gets affected by the political changes which occur often (against all calculations) of such a nature as very materially to affect and enhance the price of all articles and produce which we derive through our

navigation, and which would particularly affect the price of oils, and raise them.

In the article of oils, the prices would rise immeasurably, not having as yet established the cultivation of plants, to supply us with this, an article of the first necessity.

We may then, and that at a profit of manifest advantage, establish among us the cultivation of a most valuable plant, for which the soil and climate of this country are favorable.

Any one desirous to make a trial with one acre or more, can obtain the seeds, either of the Spring or Winter Rape, from me, either of D. Landreth, 65 Chestnut street; C. B. Rogers, 29, Market street, or Paschall Morris & Co., 380 Market street, Philadelphia, at 25 cents per pound; at either of which places I may be addressed.

Any other information as regards the manipulation, the produce in gallons, or bushels, the fitting up an oil mill, and process of manufacturing the oil from the seeds, I will impart to applicants for a moderate and reasonable compensation.

As has been shown, the raising of Rape Seed is very profitable when carefully attended to; the manufacturing the seed into oil is not less so, so that to a certain degree, combining the two together, can not fail to be highly remunerative, and as worthy the attention of the capitalist as any agricultural product with which we are acquainted.

F. A. NANTS.

P. S.—I will, in a short time, prepare a short treatise on Madder, of which I will have seed for sale next fall.

F. A. N.

For the Farm Journal.

TURBOTVILLE, Pa., June 30, 1853.

DEAR SIR:—

* * * * The Farm Journal is growing rapidly in public estimation, and I am happy to believe that the community generally in this region, are more duly appreciating those publications which are devoted to the science of agriculture.

We have in Pennsylvania ample facilities for making our land worth, on an average, \$200 per acre, and yet there are but few of us who would not willingly sell for less than half that price, and "go West," where land may be had at a mere nominal value. But the present generation will not pass away until the price of land will be estimated differently. The present "era of progress" tends so rapidly to develop the agricultural resources of the country,—and science is shedding so much light upon the labors of the husbandman, that his occupation is no longer looked upon as menial; and when there shall be a combination of Yankee ingenuity with German industry, not many years will elapse before the cultivation of the soil will be esteemed both the most honorable and profitable employment among men. * * * * H. M.

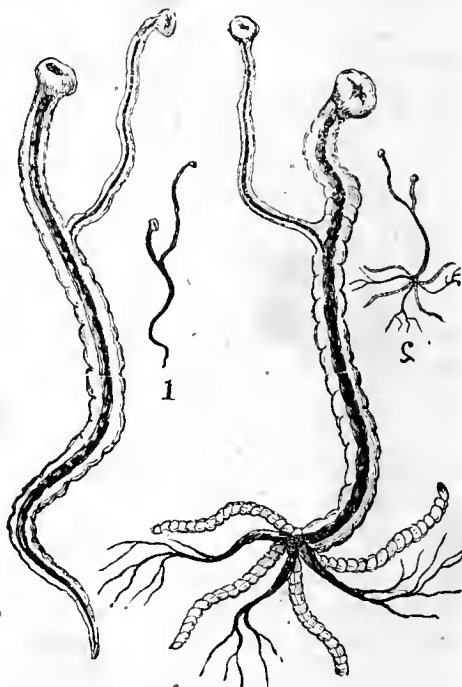
For the Farm Journal.

Gapes in Chickens.

To the Editor of the Farm Journal—Can you give any account of, or remedy for gapes in chickens, which, if not arrested, bids fair to destroy the best half of my young poultry. Improved as well as the common breed are all equally attacked, and die in a short time afterwards. Any information through your valuable journal, will confer a favor on several of your subscribers in this section of the State.

H. SILL.

Erie county, Pa.



In reply to our correspondent, we give an engraving of the worms magnified, which are generally believed to cause the disease in poultry, called gapes. The most simple and effectual remedy we know of, is to make a loop of horse hair, and introduce it down the wind-pipe of the young chicken, when, by twisting the loop a few times, the worms can be very readily drawn out. We have seen this process tried, and with great success. In Bement's Poultry Book, is a communication from C. F. Morton, and containing some valuable suggestions, which we copy below.

From all I have seen and heard on the subject of what is called the gapes in the chickens, it is a disease which is not generally understood, I shall, therefore, give you my opinion on its nature and cure. This spring, having my chickens attacked as usual with the gapes, I dissected one that died, and found its *bronchus*, or windpipe (not the throat,) filled with small red worms from half to three-quarters of an inch long. This satisfied me that any particular course of feeding or medicine given would not reach the disease. I therefore took a quill from a hen's wing,

striped off the feathers within an inch and a half of the end, trimmed it off with a scissors to about half an inch wide, pointing it at the lower end. I then tied the ends of the wings to the legs of the chicken affected, to prevent its struggling; placed its legs between my knees; held its tongue between the thumb and fore-finger of the left hand, and with the right, inserted the trimmed feather in the windpipe, (the opening of which lies at the root of the tongue;) when the chicken opened it to breathe, pushed it down gently as far as it would go, (which is where the windpipe branches off to the lobes of the lungs, below which I have never detected the insect,) and twisted it round as I pulled it out, which would generally bring up or loosen all the worms, so that the chicken would cough them out; if not I would repeat the operation till all were ejected, amounting generally to a dozen: then release the chicken, and in the course of ten minutes it would eat heartily, although previous to the operation it was unable to swallow, and its crop would be empty unless filled with some indigestible food. In this manner I lost but two out of forty chickens operated on; one by its coughing up a bunch of the worms which stuck in the orifice of the windpipe and strangled it—the other apparently recovered, but died several days after in the morning. In the afternoon, upon examining its windpipe, I found a female worm in it, differing from the others by branching off at the tail in a number of roots or branches, between each of which were tubes filled with hundreds of eggs, like the spawn of a fish, and although the chicken died in the morning, the worm was perfectly alive in the afternoon, and continued so for half an hour in warm water. While I was examining it in a concave glass under a microscope, it ejected one of its eggs, in the centre of which was an insect in embryo.

From this fact, I have come to the conclusion, that when the female worm breeds in the chicken and kills it, these hundreds of eggs hatch out in its putrid body in some very minute worms, which, probably after remaining in that state during the winter, change in the spring to a fly, which deposits its eggs on the nostril of the chicken, from whence they are inhaled and hatched out in the windpipe, and become the worms which I have described.

There is one fact connected with this disease—that it is only old hen-roosts that are subject to it; and I am of opinion, that where it prevails, if the chicken-houses and coops were kept clean and frequently white-washed with thin white-wash, with plenty of salt or brine mixed with it, and those chickens that take the disease, operated on and cured, or, if they should die, have them burned up or so destroyed, that the eggs of the worms would not hatch out, that the disease would be eradicated.

I am also satisfied that the chicken has not the disease when first hatched; several broods that I carried and kept at a distance from the chicken-house where the disease prevailed, were entirely exempt. And chickens hatched from my eggs where they had never been troubled with this disease, were perfectly free from it; and a neighbor of mine who built in the woods half a mile from any dwelling, and has raised fowls for six or seven years past, and has frequently set my eggs, has never had the gapes among his chickens.

With my first brood of chickens, there was not one escaped the gapes. But all that have been hatched since I had the chicken-house and coops well white-washed inside and out, with thin white-wash, with plenty of brine in it, and kept clean, have been

exempt from the disease, with occasionally an exception of one or two chickens out of a brood.

In operating on the chickens, although one person can effect it, it is much easier done to have one to hold the tongue of the chicken while the other passes the feather down its windpipe, and by having a small piece of muslin between the fingers, it will prevent the tongue from slipping, which it is apt to do upon repeating the operation.

Accompanying this, I send you drawings of the gape worms in their natural size, and as they appear when magnified. No. 1 are the male worms, and No. 2 the female: you will observe the heads of both male and female branch off in two trunks with suckers like leeches at the extremities of the trunks, one trunk longer and thinner than the other. The intestines extend from the branching of the trunks downwards towards the tail, and are perfectly apparent when magnified. The female branches off like the roots of a tree at the tail, with intermediate tubes filled with small oval eggs.

Yours, &c.,

C. F. MORTON.

Mill Farm, near Windsor, Orange county, N. Y.

For the Farm Journal.

The Fly in the Wheat—vs. Seed Grain.

J. L. DARLINGTON, Esq.

Dear Sir—This peculiar disease has ravaged our wheat fields to an enormous extent. The farmers in the adjoining counties enter the same complaint, some expecting one-half a crop, whilst others will be glad if they only get the seed. During the month of April, and beginning of May, our fields, with a few exceptions, promised a fair crop; when about the 20th of May, a storm arose breaking half or more of the stalks down, when first our attention was directed as to the cause of such a break.

It will be seen, by close examination, that the deposition of the ova or eggs are generally formed above the second joint, from three to eight in number, of a vermicular shape; the breach of the straw invariably occurs at this spot, for the very great reason that this deposition weakens the straw. The color of these beings differ, some being black, others brown, and a few white, and what seems stranger still, it appears as if the latter named had a dark vermicular being deeply embedded in its bowels. By placing such a one under the microscope, it will be seen that really the living being is only covered with a sac or membrane, and that this covering gives the variance in color. We have deposited a few of these anomalous creatures safely to see what may become of them, of which we will apprise our readers, if success attends our experiment. Such, in our opinion, is the nature of this malady.

Now, as to the cause we are ignorant. Some assert that a certain fly deposits the egg in the fall, and in time and season it comes to maturity. This we rather doubt for the rudiments of the stalk are very imperfect in the fall, and more than this, we see this deposit in such fields, which by the late sowing, as

sumed only the incipient stages of germination before the winter's blast.

Is the deposite made in the Spring? This we also doubt; for we well know that the sprouting of grain will often take place, when really insects are yet in a torpid state, and should this deposit occur after this, we doubt very much whether the injury to the stalk could be as extensive, thus early, as it really is.

We are thus led to believe that the error lays in the seed grain. 1st. From the very curious fact that fields belonging to different farmers in the immediate vicinity are differently effected. We know fields where, in the one no disease is known, whilst on another farm the field perhaps joining, the grain is enormously injured. 2d. We never see the deposition in the rye, even in such a field, when plenty of rye is intermixed. We may thus very safely conclude that *the cause may be looked for in the grain of the wheat prior to sowing.*

We should be glad to hear the opinion of others, on this obscure yet wide spread disease.

E. K. BEAVER-

Worcester, Montgomery county, June 10th, '53.

For the Farm Journal.

Breeding Milk Cows.

On reading an article in the last number of the Farm Journal, giving notice of E. P. Prentice's Ayrshire bull, "Dundee," I felt called upon to make a few remarks, and if worthy a place in your columns, you may use them.

There has been much said and written by breeders of different kinds of stock for the dairy. Durhams, Devons, Ayrshires, Alderney's, &c., have all had their advocates, and there are individual cases where as much butter has been made from one kind as another.

So far as I understand the matter, if the Ayrshires are what they are said to be, a cross between the Durham and Alderney, they are very near right, if bred on the principle laid down by "Nefflin," for the Durhams give the quantity, while the Alderney adds to the quality and that is the end to be arrived at, the largest quantity and best quality.

I know of no nicer milk or butter, than is given and made from a pure Alderney cow, and I think a cross with a good Alderney bull would help our stock in this neighborhood very much, in this age of twelve and fourteen pounders. But it is useless to cross a good cow of any breed with an indifferent bull, expecting to get good stock. I believe it has never been done.

The best cows are generally marked No. 1, in Guenon's system, and should be put to the best bulls; raise a bull calf; breed him to other cows of the best quality, and then a breed that cannot be excelled may be got up—it matters not what the name may be, for I hold it of no importance what name, or

country they come from, if the quality and quantity are right.

A LEARNER.

Chester county, Pa., 6th mo. 8th, '53.

The above article, although signed "a learner," was written by one who is better posted up than most, on all matters relative to deep milkers, and has given that subject much attention for several years, with a view to fix some certain standard of selection for dairymen. The district of country within thirty miles of Philadelphia, and especially the dairies in Chester and Delaware counties, have made the excellence of its fresh butter proverbial. As her population increases, we find grazing and feeding cattle, and grain growing, gradually being abandoned to farmers more remote. Dairy products must hereafter be the chief business of the farmer, within the above limits, and to them as well as those in other parts of the State, it is important to keep only the most productive cows, and to understand the true principles of breeding them. Guenon's marks are a pretty sure guide. They are to be considered merely as *evidences* of the milking quality, or the contrary, and as has been observed, are found to some extent in each of our well known breeds. Which one most invariably has them, is still a question. Only such individuals, however, no matter what the breed, should be retained. Although opposed to indiscriminate crossing, of distinct breeds, which often results in a race of mongrels of no established or permanent character, we should suppose a cross between the Durham cow and Alderney bull, well worth a trial. A fine opportunity is now offered to the farmers in this section, to make use of a pure Alderney bull, owned by our friend John Worth, of East Bradford, who by the way is becoming widely known, as an eminent and successful breeder of both sheep and cattle. This bull, whose portrait we hope to have for a future number of our Journal, has the property of *good handling*, more than any animal we ever felt. We anticipate great advantage to this neighborhood from his use. In making such a cross, (as our old friend J. Pedder, now of the Boston Cultivator, used so often to urge,) always commence with "*dam the best.*" "The female should be the largest."

For the Farm Journal.

Guano on Turnips.

MR. EDITOR:—

As the time for sowing turnips is near at hand, I will give you the result of an experiment I tried last season upon this crop. About the middle of July, I ploughed up one-third of an acre of sod ground, having no mellow ground to spare, upon which I sowed one bag (180 lbs.) of Peruvian guano, mixed with its bulk of plaster. The ground was ploughed as deep as my largest bar-share could turn over, probably seven to eight inches, and harrowed over half a dozen or more times, till it was perfectly mellow and pulverized down to the grass.

Along side of this patch I ploughed another third of an acre, and treated it in the same way, except using short barn-yard manure instead of guano. Both patches of ground were sowed with the common red top turnip on the same day, the later part of July, and in the month of November the crop was gathered with the following results:

On the patch where the guano was applied I took up *fifteen* cart loads, estimated at *twenty* bushels to the load, they were not accurately measured,—and on the other patch there were *seven* cart loads—thus showing more than two bushels to one in favor of guano.

The difference of growth, all through the season was a very marked one. The guano pushed the young plants ahead so rapidly, from the moment they appeared above ground, that the *fly* had no effect at all upon them; while on the other patch, where the growth was so much slower, the ravages of this insect were quite perceptible.

My experiment satisfied me that, for a crop of turnips there is nothing equal to guano. D. M. C.

For the Farm Journal,

The Farmer's High School of Pennsylvania.

TO THE EDITORS OF THE FARM JOURNAL—Like yourselves, I put the enquiry (to one of the purest members of the last House of Representatives, and President of a county agricultural society,) why this Institution was not called into existence, and was replied that it had objectionable features, a view fully agreeing with that entertained by me.

In the report of the committee, and no doubt in the frame of the bill, it is proposed that a *certain number of pupils be educated gratuitously*.

If a bill ever passes to establish such school, with this feature engrafted upon it, I hope to see the whole a perfect failure. Such favoritism is beyond the days of toleration, and justly so. Let all be kept alike, and you may be certain, if you please none you will offend none. Such favoritism is mostly thrown on wrong persons. This is one reason why the bill did not pass. With this feature omitted, I have no doubt the next Legislature will pass a bill, to give us what we ought to have had a number of years ago.

J. S. KELLER.

Orwigsburg, June 13, 1853.

For the Farm Journal.

A Few Queries for Fowl Connoisseurs.

MR. EDITOR:—

Will you or some of your poultry correspondents, have the kindness to inform me through the columns of the "Farm Journal," wherein consists the difference between the Cochin China and Shanghai fowls, or whether there is any difference except in name? I am induced to make this request, after having examined a number of the standard works on poultry, and found that no two authors agreed in their descriptions.

I should also be pleased to know from some good authority; the origin of the so called "Chittagong" fowl, and whether they may be considered a distinct breed, or merely mongrels.

My reasons for making this inquiry, is, that having had them from what was and still is considered the most reliable sources, I found their progeny to display as many colors as "Joseph's coat."

I would further enquire in regard to the Chittagongs, whether they are not merely a cross between the Shanghai and the Bucks county or Booby fowl?

Again. Will any of your correspondents enlighten me in regard to the "boobies?" A gentleman of the highest respectability, informs me that some twenty-five years since, a number of the Shanghai fowls were imported by a Mr. Musser, (a physician I think,) formerly an officer of the Customs in Philadelphia,—that Mr. M. so soon as his stock increased, distributed them through various sections of Bucks county, and that by crossing with the common "Dunghill," the present "Booby" breed, (if breed you can call it,) was produced.

Can any one enlighten me a little further on this subject? S.

Philadelphia, June 6, '53.

For the Farm Journal.

Windlass for Raising Stone, Logs, &c.

TO THE EDITORS OF THE FARM JOURNAL:—

A contrivance of one of my neighbors to set on cart wheels, for the above purpose, I thought might be of service to some of your readers; if you think so, please insert in the Journal.

Get four pieces of scantling, three by five inches, and about three feet long, and pin them together in a square form; let the back cross piece be on the top of the two side pieces, and the front cross piece under them; let the two hind pins run through to the extent of three or four inches, so that they may correspond and enter what we call the eyes of the axle, which are placed to fasten the bed on by its hocks. The front cross piece should have two pins running down near the middle to straddle the tongue, then the frame will be kept to its place.

Now get a gum stick for the windlass, from six to eight inches in diameter, and a little longer than the width of the frame, take it to the turners and get it rounded and a journal at each end; bore a few holes through it to insert crowbars to hoist by, and put a hook in it for the chain, and it is ready to be placed on the frame. It should be put as near the axle as possible.

It appears to me to be a very simple affair, which any farmer can make, may be easily put on and taken off, and be rendered quite useful.

One man can raise a stone which will be load enough for two yoke of oxen. E. S.

London Britain, Chester county, Pa.

For the Farm Journal.

Agricultural Review, No. 4.

Potatoes are not raised for market, but are an item not readily dispensed with in the family economy. Each farmer plants about half an acre, generally after corn, though some use a grass sod. It is the universal practice to apply long barn-yard manure, at the rate of twenty-five or thirty ox cart loads per acre; this is spread and ploughed in during all the Fourth month, (April,) dropping the cuttings of one or more eyes each, (taken by some from small, by others from large seed,) on the land side of every third furrow, from six to ten inches apart; some rake the manure into each planted furrow; roll or harrow after planting; as soon as the plants begin to appear harrow once, pass the cultivator through twice, at intervals of a week, and lastly ridge up with the plough. Hand hoe at the first hoe harrowing, sprinkling one to two bushels plaster along the rows, and hand pick weeds at the ploughing. Dig as soon as the vines die; this is mostly about the first of Ninth month, (September,) and if any appearance of rot, spread upon a board floor, and sprinkle with fresh slaked quick lime, until the approach of cold weather, then place in the cellar. Seed used—Mercer.

We have not been exempt from that inscrutable disease, the *rot*, nor do we know any *cure*, though from the sandy nature of our soil, we have suffered less than many other sections. To guard against it as a preventive, experience has led to *early planting* upon high *light soil*. It first appeared in 1843, when the writer had half an acre on a flat, heavy clay, north exposure; planted Fifth month ninth; dug Ninth month twenty-fifth; growth of tubers very fine but almost all affected by a virulent *rot*. Gathered eight bushels of the apparently sound, spread them out, but lost most of them. Since then, with *early planting* upon *sandy loam* have lost none of any account, though the disease has been developed in a few tubers, say half a dozen, nearly every year, and at times neighbors have lost nearly all on low ground. During the time seed has been renewed twice, from Maine and Jersey, with manifest advantage. The last year, the following experiment was tried upon three-fourths of an acre: After corn, first ploughed and harrowed, then half an acre covered heavily with long barn-yard manure, spread evenly, and ploughed in every furrow; cuttings dropped every third furrow, eight inches apart; one-half from large, the other from small potatoes, about the size of hickory nuts. Planted Fourth month the twenty-third, (the spring was very backward;) dug Ninth month the ninth; growth of vines moderately fair; all dead previous to digging; the yield from half, planted from large seed, was estimated at one-half more of *marketable* ones than the other, and one-third more altogether; slight traces of the rot perceptible; the remainder of the patch, one-fourth acre, was divided into equal portions. All were struck out in furrows,

three feet apart; one half manured heavily with fresh horse stable manure; the other received a compost of leached ashes, lime and plaster; ashes $\frac{3}{4}$, lime $\frac{1}{2}$, plaster $\frac{1}{4}$; about ten bushels to the one-eighth acre, each in the furrows; cuttings dropped and covered with a hoe. The first half were planted Third month the twenty-second, followed by a month of cold, wet weather.—Cuttings from small seed, the vines grew luxuriantly, and many of them retained their vitality when dug; tubers numerous, but many small; none rotted. The second half, or ashed part, were planted Fourth month the twenty-third; cuttings half from small, half from large seed; the same difference perceptible as noted above; growth of vines light, all dead, sometime previous to digging; these were the *earliest* matured, very fine in quality, of good size, but very few in the ground; no rot.

Cost of raising per acre:

Ploughing one day,	\$2 00
Dropping,	1 50
Rolling,	15
Harrowing,	25
Seed, ten bushels,	5 00
Cutting, do.,	75
Cultivating twice,	1 00
Hand hoeing, and weeding three days,	2 25
Ridging,	50
One and half bushel plaster, and sowing,	50
Digging,	5 00
One-fifth of twenty-five loads manure, a \$1,	5 00
Do., of fifty bushel lime, a 15 cents,	1 50
Handling manure,	3 00
Spreading do.,	75
Marketing, a 7 cents per bushel,	7 00
Fencing,	1 00
Taxes,	50
Interest on \$85,	5 10
Expenses,	\$42 75
Eighty bushels, a 50 cents,	40 00
Twenty do., a 25 " "	5 00
Product,	\$45 00
Expense,	42 75
Profit per acre,	2 25
Birmingham, Sixth month, 1853.	C. B

Stirring the Soil.

MR. EDITOR:—Experience has long since satisfied me that frequent stirring of the soil, is a preventive, to a very great extent, of the ordinary effects of drought.

I do not, of course, wish to be understood as including the doctrine that it will render rain *unnecessary*, for this would be to deny the wisdom of a very important provision of Providence; but that it enables the farmer to derive important benefits from this soil, at times and in important seasons when the windows of heaven appear to be literally closed, and the earth languisheth for the kindly and life-imparting rain. A surface which is kept constantly fine and light,

does not allow the moisture beneath to exhale, and it is thus rendered available for the use and nourishment of plants.

By passing the cultivator through a corn-field once a week, the crop will be secured against the effects of drought much more effectually than by any other means that can possibly be adopted. As the soil falls together, and becomes consolidated, the supply of moisture ascends by capillary attraction, and escapes to the clouds. Every one must have noticed this in solid land, and even in corn-hills, where, owing to a practice prevalent in some sections, and which is almost invariably with those who till light, sandy soils, the hoe is stamped down upon the soil immediately over the corn in planting. The compressed earth is always *moist* in the morning, while the spaces between the hills remain dry, because uncompressed.

As the supply of moisture in the soil fails, the mark of the hoe becomes less and less apparent, and finally no humidity is seen. On digging down, it will be perceived that the fluid is exhausted, while in the spaces between the rows, where the surface has all the time been light, and fine, and dry, there is moisture enough within an inch of the surface. I have frequently been surprised on observing the effects of this on lands, and have alluded to it repeatedly in my communications to various papers, and in some instance, not without benefit, I hope, to those for whose especial enlightenment they were intended. The cultivator, were it useless for every other purpose, which it certainly is not, would be invaluable for the assistance it renders in this.

All crops require moisture. No matter how rich the soil may be in the elementary matters constituting the food of plants, water is necessary to render those elements appropriable. They can be absorbed and assimilated only in a state of solution, and water is the only *menstruum* used in the laboratory of Nature in accomplishing the object, or consummating the phenomenon named. Wherever a crop appears to languish and suffer for want of water, let the surface be immediately stirred. Keep the cultivator moving, and rest assured that its operations will tend more to the benefit of your fields than any thing save rain.—[Germantown Telegraph.

A PRACTICAL FARMER.

Bald Eagle Farm, May 4, 1853.

New Importation of French Merinos.

The Humbolt on her last trip brought over 109 ewes and two bucks of these remarkable sheep, for S. W. Jewett, of Middlebury, Vt. They are from the celebrated flocks of M. M. Gilbert and Caynot, whose farms they left on the 12th of April, reaching Mr. Jewett's farm on the 1st of May. Mr. Jewett informs us that they came into port in the finest condition, having been well cared for on the passage, but owing to a misunderstanding of his orders, they were suffered to remain two days on the lower deck of the ship in port, where for want of fresh air, which they received by a wind sail while the ship was in motion, two died on board, and we noticed one or two others in a bad way: the remainder appeared remarkably well. The cost of freight, \$15 per head, and other expenses, will make nearly as much more by the time they reach their destination, where the owner has upwards of 500 of previous importations, his entire flock now consisting of this breed.

In making sales, Mr. Jewett pursues the same plan of the French breeders, that is to get one or two crops of lambs, and then sell the ewes. His yield

of lambs is about eighteen per cent. greater than his total number of ewes, as about one-third of his flock produces twins. We estimated the weight of this flock at 160 lbs. each, which is a very heavy average for breeding ewes, as nearly all of them parted with their lambs in March.

This strain of sheep is not as fine wooled as some others, but carry very heavy fleeces, upon large strong bodies, which make good mutton. Every part, even the forehead and upper parts of the ears, is covered with wool.

Every importation of this kind is a blessing to this country, which goes on multiplying itself, very differently from some importations from the same place.

Many of these sheep were marked with figures in India ink on the underside of the ear, by which number they are registered. The process is a very simple one, easily and rapidly performed. The operator has a set of numbers, three each, the face of which are small points which will make slight punctures in the skin, when pressed upon it. Suppose the sheep to be marked is No. 721, he sets these figures in a pair of pincers, and then rubs a little prepared ink, indigo, or vermilion, on the smooth skin of the ear, gives it a pinch, rubs it a moment with his finger, and 721 is fixed upon that spot. Thus by changing figures, with this simple little machine, a sheep can be marked any number from 1 to 999,888,000. A thing of so much importance, and so simple and cheap, cannot be too widely known.—[Agricultur.

Wagon Grease.

What a curious calculation it would be, to ascertain the different amount of force required to drag a loaded wagon with each of the different boxes supplied with each of the different preparations in turn now used for greasing them! Every farmer knows that a well greased wagon runs much easier than one imperfectly greased, and different lubricating materials have more or less beneficial effect, but no one seems to know the precise mixture that should be used. A very slight difference in this material would save a larger amount in the cost of the power used to transport agricultural and other products, than has ever been appropriated by the general government for the benefit of agriculture. Stearine, one of the constituents of fatty substances, is now made in large quantities in Ohio, and elsewhere, and is as hard as spermaceti, withstanding the sun's heat in summer, and presenting at times a lubricating surface when heated and attaching itself firmly to surfaces. Might not this material be mixed with grease, varying the proportion according to the year, so at all times to secure the presence of a lubricating material more lasting than the ordinary mixtures, and at an eventual cost scarcely greater, while its increased efficiency might render its use profitable.—[Working Farmer.

Mammoth Steer.

A mammoth steer, raised by Mr. John Brillinger, in Manchester township, York county, passed through this place on Monday last. He is only four years old, and weighs 3480 pounds.—[Columbia Spy.

The grateful soil yields back with interest all that is lavished upon it.

Ayrshire Cows.

Our engraving opposite, exhibits what is said to be a faithful portrait of the imported Ayrshire cow; Ayr. The cow on the right, is Charlotte, pure Durham, introduced to show the relative size of the two breeds. They are both the property of E. P. Prentice, Mount Hope, near Albany. Ayr is the mother of Dundee Second, whose portrait was in our last number, to which we refer, also for some account of the Ayrshires. The subjoined description of Ayr, we copy from a former number of the Cultivator, where the engraving first appeared.

Ayr, whose likeness has been very accurately delineated by Mr. Van Zandt, was imported, in 1842. She is nearly a model of what, in our opinion, a *dairy cow* should be, and on this account we deem it proper to give a tolerably full description of her. She possesses in a high degree the excellent milking properties which distinguish the best of the breed to which she belongs, united to a more perfect symmetry than we have ever seen in any other Ayrshire, and which we have seldom, if ever, known equalled in any breed. Her body, (as will be seen by a comparison of the figures,) is small; but her frame or bone is proportionately less. The head is small, the face dished, the forehead broad, and the eye prominent. The neck is small at the juncture of the head, but pretty deep and full at its connection with the body. The back is straight, the crops fine, the ribs round, the loins broad, the flanks deep, the udder capacious, (spreading wide on the body, but not hanging low,) and the milk-veins large and prominent. The legs are small, but strong, hard and sinewy, like those of a deer. The great depth and length of the hind quarters might, from a profile view, give the idea that the chest was too light; but though the hind quarters are proportionately heaviest, (as we prefer to have them in a milch cow,) there is no deficiency in the fore end. The sternum (or breast bone) is wide, the fore legs stand wide apart, the bosom is full, and the first ribs are particularly full and wide-spread at their junction with the sternum, giving a chest of great capacity for an animal of her size.

As her form and general appearance indicate, she is healthy and hardy. Her skin is of a yellowish hue, mellow and elastic; and though she does not possess the fattening quality in an excessive degree, or to an extent that would interfere with her dairy qualities, she thrives very rapidly when not giving milk. The quantity of milk she affords is, in proportion to her size, quite extraordinary. She has given, when on grass feed only, upwards of twenty quarts (by actual measure) per day, and she continues in milk till near calving. No particular experiments have been made with her in regard to butter, but her milk has been ascertained to produce a large proportion of the richest cream.

Her offspring are much like herself. She has had four calves since she left Scotland. The first, a heifer, was dropped on shipboard during the passage; the next, a very fine bull, is now owned by Mr. J. W. Howes, of Montpelier, Vt.; the next a bull, now nearly two years old, a very superior animal, inheriting in a remarkable degree the characters of the dam; and the next a heifer, equally as fine as her other progeny, now about two months old. The two last, together with three grand-daughters of Ayr, are still in Mr. Prentice's possession.

E. P. Prentice has been for many years, a breeder

of choice animals, and to his several importations, the whole country are indebted for some of its best stock. We understand his experience with the Ayrshires, induces him to give them the preference for deep milking, over the Durhams, and as he had considerable trial with both breeds, his opinion is entitled to great weight. All facts tending to settle the great question of which is the best *breed* of cows for the dairy, are interesting to the public, and we should be obliged by having the experience of farmers in different parts of the country, on this point. We have had more to do with the pure Durhams, than any other breed, and can only say for ourselves, that we value them and their crosses, with our selected common stock, before any thing else. The most productive dairies in this vicinity, are of such a cross. One of our cows, an imported Durham, made 15½ lbs. of butter per week, and her cream was so thick that it could be taken off the pan of milk, by lapping over, and in a single piece. Butter was made from it on one occasion in a tea-cup, by stirring with a spoon, in a little more than a minute. This was an extraordinary case but there are certain families of Durhams, which have been bred with reference to deep milking, more than for beef, and by selecting such with good pedigrees, the milking property has been found to be generally well sustained. Our columns are however, open to the discussion of this question, about which we know there is much variety of opinion.

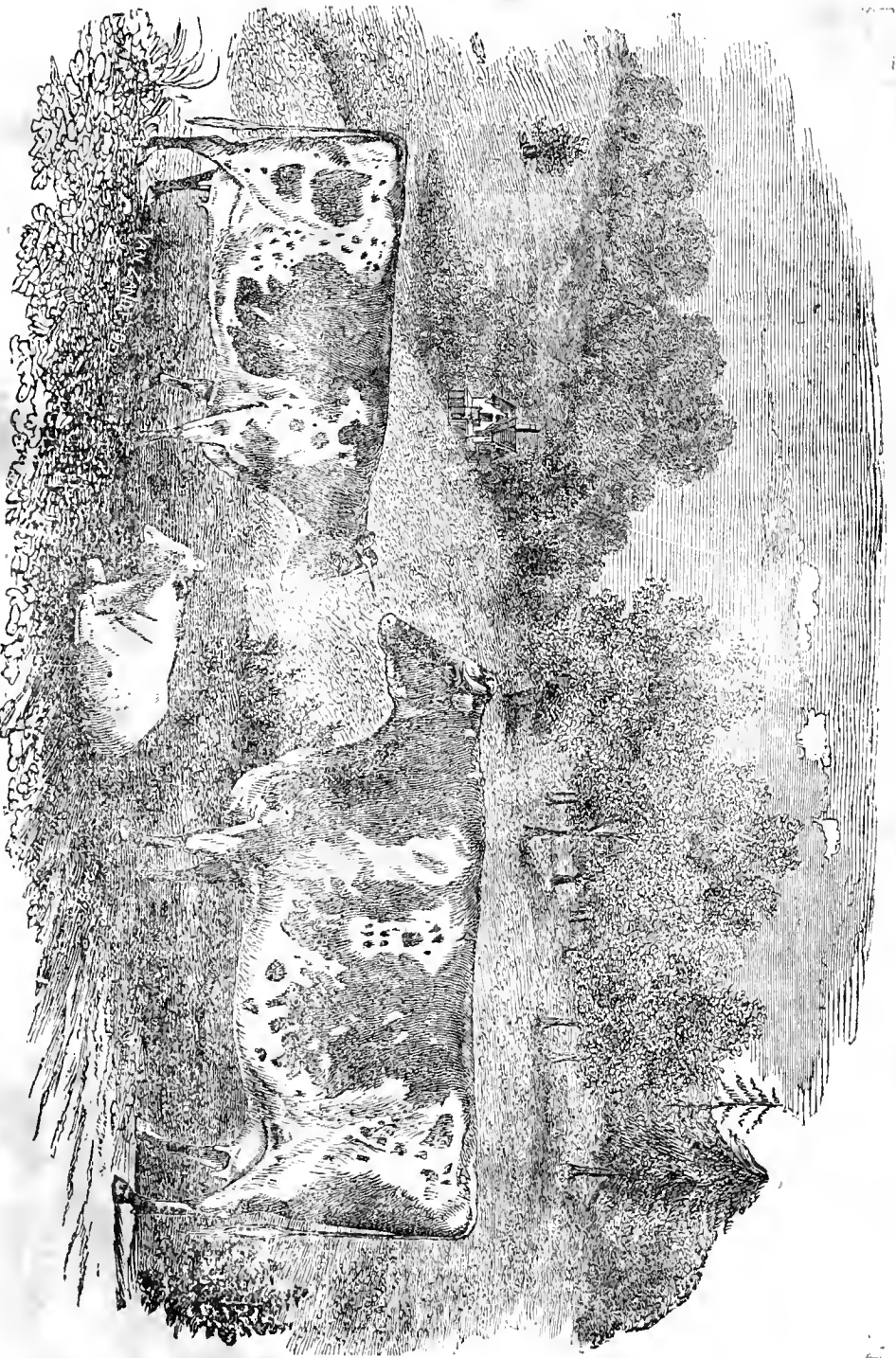
High Price of Cattle.

The continued high price of cattle appears to be a marvel to feeders of cattle. A New York paper says a very material advance in the prices of beef cattle has recently taken place in this market, referable, we find, on inquiry, not so much to a growing scarcity in those sections of the country, whence come supplies, nor to an increased consumption at home, but to the springing up of new inviting markets elsewhere. The graziers in the Northern Illinois region, who have heretofore been among the most extensive contributors to the great cattle markets of New York, Philadelphia, Baltimore, &c., we are now told, now drive their herds across the plains to supply the demand which invites them to California. Hence just now, the comparative scarcity of cattle in this market, which produces in turn the high prices asked for beef at wholesale—say from nine to ten and a half cents per pound. At these rates, the retail consumers must be content with fifteen and sixteen cents, or thereabouts. Beef is thus becoming a luxury which only the rich man is able to enjoy.—[Exchange.]

To Fatten Fowls.

The best food for fattening fowls is potatoes mixed with meal. Boil the potatoes, and mash them fine while they are hot, and mix the meal with them just before it is presented. They fatten on this diet in less than half the time ordinarily required to bring them to the same condition of excellence on corn or even the meal itself.

AYRSHIRE AND DURHAM COWS--The Property of E. P. Prentice, Esq., Mount Hope.



Chester County Horticultural Exhibition.

The Chester County Horticultural and Industrial Exhibition, usually held in June, occurred on the 16th, 17th and 18th ult. In addition to the fruits of the season, flowers, green-house plants, vegetables, the display embraced agricultural implements, leather and coach-maker's work, carriages and harness, drawings, paintings and sculpture, needle and fancy work, cabinet work, dentistry, &c. Although the contributions were not quite equal in amount to former seasons, the large Horticultural Hall of the Society was densely crowded with visitors, over four thousand tickets being disposed of. The receipts were over \$500.

An increased impulse is being given to Horticulture as well as Agricultural improvement by these annual exhibitions, all over the country. The effect of which will be and is seen, not only in an increased production from the soil, but in those moral influences with which attention to these two great departments is always more or less connected.

Our friends of Berks county have also attempted a Horticultural Summer exhibition, for last month, which we should be pleased to hear, succeeded to expectation.

On two of the three days of exhibition at West Chester, addresses were delivered by Elliot Cresson, Esq., of Philadelphia. They were truly practical and useful in their character. Assuming the whole debt of the country abroad, to be from three to five hundred million of dollars, he urged the cultivation of several staple articles adapted to our soil and climate, as a means of reducing this amount, and making us more dependent on our own resources, such as madder, rape, flax, osier willow, &c. The manufacture of paper from flax haulm, oil from the spanish chesnut, and dye stuff from the maclura were also adverted to, and the speaker offered three premiums of \$10 each, as inducements to farmers, to commence the culture of these articles.

Some specimens of prepared willow twigs for baskets, were exhibited by Isaac G. Darlington, which appeared well adapted to the purpose. They were of the variety Vitellina, which is much used in Europe for baskets. It is found in several parts of Chester county, and according to Dr. Darlington's Flora Cestrica, came originally from some wicker work found sprouting in Dock creek, near Philadelphia, by Dr. Franklin, who took them out and gave them to Charles Norris, by whom they were reared, on grounds now the site of the Custom House, in Philadelphia.

Pennsylvania Wool.

Nearly the entire clip of Wool in Greene county, has been already purchased at prices ranging from forty to seventy-five cents per pound. The clip in Washington county is pretty generally purchased at similar rates.

Pennsylvania Horticultural Society.

The twenty-fifth annual exhibition of this Society, is to be held in Philadelphia, on the 21st, 22d, and 23d of September next. We have been favored with a printed schedule of premiums, embracing the usual extensive list of floral designs and bouquets, fruits, flowers and vegetables. One of the premiums strikes us as rather novel. "For the best twenty plants from a private collection," a silver pitcher is proposed to be "*presented*," of the value of \$200. Thus far seemed very liberal, but on reading farther, we find it is to be *held* by the owner, (not of the pitcher) but of the successful collection, *for one year*, and to be yearly competed for; the donor's and victors names to be engraved thereon. There is originality at least in this *premium*.

Rape Seed, Madder, &c.

We invite attention to the article on cultivating the rape, and which has been brought out by inquiries in one of our former numbers.

The writer has had very considerable experience in the cultivation of this and the madder crop, on the continent of Europe, and his information and assistance will be very valuable to those who are about to commence their culture. We expect an article on madder from him, for our next number. In the mean time he wishes us to say, that July and August are the proper time for planting out madder sets, in a damp spell of weather, and that he has plants for sale, which he will furnish to order, at the agricultural warehouse and seed store of Paschall Morris & Co., 380 Market street, Philadelphia.

F. A. Nants also wishes to purchase or rent a farm, with the view of growing these two crops, in either Pennsylvania, Delaware or Maryland; but convenient to railroad or water communication with Philadelphia, and would like immediate possession, at least of two or three fields.

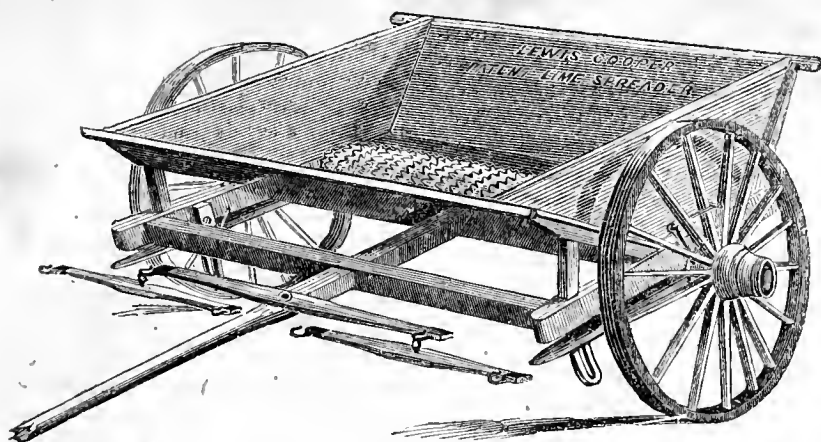
Letters addressed to him, (postage paid,) at 380 Market street, Philadelphia, will receive attention.

Pittsburg Horticultural Society.

We have received a printed schedule of the prize list of this Society, for their autumnal exhibition, to be held at Pittsburg, on the 6th, 7th, 8th, and 9th of September next. It embraces all the varieties of fruit, including strawberries, blackberries, cranberries, raspberries, &c.: an extensive list of vegetables; also, plants and flowers, designs and bouquets. The committee for the latter consists exclusively of ladies—a very appropriate arrangement, and we have no doubt their award will be bestowed where it truly belongs. In matters of this kind, they are the best judges always.

Sweep-stake premiums of \$20, are offered for the largest and best collection of fruits, flowers, plants and vegetables from any State, and \$10 for the second best. The committee of arrangements are

A. Hersperger, Jas. Murdoch, U. H. Williams, Jos. McKain, and H. Woods.



Cooper's Lime Spreader.

The above cut represents the Lime Spreader, invented and patented by Lewis Cooper, of Coopersville, Lancaster county, Pa., and is represented as a most admirable implement for the purposes for which it is intended. Although but recently patented, and but little efforts made to introduce it to public notice, its merits have already won for it a high place in the estimation of a large number of intelligent and observant farmers, in our own and adjoining States. Some of the advantages enumerated in its behalf are:

1. It saves labor and time, and does its work with inimitable evenness.
2. It is an entire machine in itself, to which a pair of horses, oxen, or mules, may be hitched, and a load carried, without waste, to the place where it is to be used, where it may be put in operation in half a minute, and will evenly distribute any desired quantity to an acre.
3. It weighs no more than a good ex-cart, and will carry as large a load.
4. It feeds itself, crushes and thoroughly pulverizes all hard lumps, and even *small lumps of core*, while large lumps will not injure the machine, but having been cleaned of all the lime that is on them, may be thrown out as refuse when the trough becomes empty.
5. With it, one man and team can do at least as much work as four men and two teams without it, while the evenness with which the work is done can in no way be equaled.
6. The machinery is simple and strong, not liable to get out of order, and very durable—the working parts being all of iron.

The want of such a machine as this, has long been felt, as it is not only a labor-saving, but a lime saving implement, "spreading the lime evenly as a snow-fall," thus securing regularity in every part of the field. Besides this, it can be regulated to spread almost any desired quantity to the acre.

Mr. Cooper having made arrangements to manufacture more extensively than heretofore, he will for the future be able to supply all demands. Paschall Morris & Co., 380 Girard Row, Market street, Philadelphia, are the agents for that city, and machines may be seen at their Agricultural Warehouse, any time after the first of July.

Fruit Trees.

All agree, says a leading cultivator of fruit in Massachusetts, that the proper and only judicious method of preparing the soil for fruit trees is, by sub-soiling or trenching the earth to the depth of eighteen inches or two feet, and that, during this process, the upper and lower soils, together with the appropriate manure, should be thoroughly incorporated: The cultivator who is not willing to take these preliminary measures had better abandon the project of raising fruit trees, and save both his time and money.

Downing states that the best compost for fruit trees is—peat and ashes (five bushels of fresh, or ten bushels of leached)—a wagon load of peat, containing lime, potash and phosphates.

Let this compost lie a fortnight. Add to every cart load two bushels of air-slacked lime, for *apple trees*.

Add half bushel of ground bones, two bushels of ashes or five pounds of potash dissolved in water—for *pear trees*.

Add half bushel of lime, half bushel of ashes, a peck of salt—for *plum trees*.

Add two bushels leached ashes—for *peach and cherry trees*.

Add a bushel of lime, a bushel of ashes, half bushel of plaster—for *grape vines*.

This compost may be put on two inches thick, and forked in, so as to cover the ground as far as the roots extend.

The proportions will vary according to the quantity of compost to be made.

By the analysis of Dr. Emmons, the ash of the apple tree contains more than one-half lime; so lime largely preponderates in the manure. The ash of the pear tree contains the largest amount of phosphate of lime; so bone dust should preponderate in the manure.—[Valley Farmer.

C. II.—The article shall appear in our next.

For the Farm Journal.

The Strawberry Controversy.

The statement of Mr. MEEHAN, in the April number of the Farm Journal, alleging that he has observed the sexual characters of the Strawberry-flowers to be variously modified by culture, or different methods of treatment,—has elicited some strong asseverations of *opinion*, in contradiction to that allegation of *fact*. One writer unhesitatingly declares the alleged change to be “*utterly impossible*,” and I understand that in the Queen City of the West, they have had a *public gathering*, to deliberate on the subject, which resulted in a *Pronunciamento* adverse to Mr. MEEHAN’s statement,—his facts and observations being *rejected* by a clear majority of the voters present! The matter being thus *settled*, by preamble and resolution, after the manner of political difficulties at a war-meeting, it may seem to be out of order, now, to offer any remarks on the controverted topic. Nevertheless, as this is reputed to be a Free Country, I should like to be indulged with the privilege of submitting a few suggestions,—if not in arrest of judgment, at least as a plea in mitigation of the sentence, against my friend MEEHAN. It is the remark of a vigorous and sagacious modern writer, that “no scientific question was ever yet settled dogmatically, nor ever will;” and I think the same may be especially predicated of questions of fact, in Natural History. I may here observe, that I was favored with the opportunity of examining one of Mr. MEEHAN’s specimens,—in which there were certainly two scapes from the same root—one bearing a cyme of *pistillate* flowers (with minute rudiments of abortive stamens,) and the other a cyme of *perfect*, or hermaphrodite flowers: and whether the specimen was the progeny of a pistillate, a staminate, or a hermaphrodite plant, I should think the inference plausible, if not irresistible, that the flowers on at least *one* of these two cymes, must have been a modification, or altered product, of the parent plant. It is this kind of change, in the character of the flowers, which I understand Mr. MEEHAN to announce, as having occurred in plants under his management. Now, in view of the countless modifications daily observable in the organs of plants—and especially in the *floral organs*—I can perceive no sufficient ground for declaring the changes, reported by Mr. MEEHAN, to be “*utterly impossible*.” The modifications here referred to, are a very different thing from the alleged *transmutation of one kind to another*,—which is vulgarly supposed to take place in certain plants, just as the Alchemists formerly pretended was effected among the metals: They merely alter the texture, distort the forms, or affect the development, of organs; but do neither change nor annihilate those *essential characteristics*, by which the plant is rendered permanently distinct from every other genus and species. The floral organs of many plants are remarkably subject to modification, under the long-continued influences of soil, climate, and

culture, or management. Some flowers are rendered *double*, as it is termed, by the expansion of stamens into petals; others become imperfect, and even neutral, by the abortion or blighting of the stamens, or pistils, or both. The *Strawberry* appears to be very liable to this kind of blight; and hence the much talked of sorts, among cultivators, of *pistillates*, and *staminates*,—though in all the pistillate flowers, which I have examined, there were *vestiges* more or less obvious, of abortive *stamens*, on the rim of the calyx. It also varies much, under culture, in some other features,—especially in the development and character or quality of the *receptacle*, or what is commonly regarded as *fruit*: but no one, I believe, has yet seen a Strawberry plant transmuted into a *Cinquefoil*,—though so nearly allied in habit. The organs of plants may be greatly disguised by the influences above mentioned; but still the essential distinguishing traits are preserved,—and there seems to be no insuperable obstacle to prevent a plant, with modified or abortive organs, from reverting, under a change of circumstances, to its original condition, and resuming its pristine form and character. The normal, or what may be called the *constitutional* character of the Strawberry-flower, is to be *perfect*—*i. e.* furnished with both stamens and pistils (possibly such may be the true normal structure of *all* flowers); and although many other plants, as well as the Strawberry, are found with *imperfect*, and even *neutral* flowers,—every Naturalist and careful observer knows, that there is often an obvious effort and tendency, in such flowers, to a more complete development: *i. e.* to become *perfect* and *regular*. We occasionally see *diandrous* flowers become *didynamous*,—and *didynamous* plants developing *regular pentandrous* flowers; and it is not at all unusual to find the *staminate tassel* of the cultivated Maize (*Zea Mays*, *L.* a *monoicous* plant,) bearing *fertile flowers*, and exhibiting a very successful attempt at the production of an *Ear*—or *cluster of Ears*—of *Indian corn*. These instances, I trust (for it is needless to multiply them,) may suffice to show that there is nothing irrational, nor incredible, in Mr. MEEHAN’s observations; and that it is rather strong phraseology, to declare such phenomena to be “*utterly impossible*.” The polemic writers on this Strawberry question, speak of the necessity of staminate plants among the pistillate, to produce, or perfect the *fruit*. No doubt, the pistils must be fertilized, in order to produce *seeds* that will vegetate. But what do those gentlemen understand, by the “*fruit*?” Do they mean the little single-seeded *akenes*, or *nutlets*, which are sprinkled over the enlarged pulpy receptacle,—or do they refer to the *receptacle, itself*, which in popular parlance is intended by the term “*fruit*?” If they have reference to the *real fruit*—the *nutlets* which contain the seed,—there is probably no question (as already intimated) about the necessity of staminate influence to produce perfect fruit. But I

have a suspicion, that by the term "*fruit*," they mean the delicious *receptacle* which bears the fruit, and if they mean to allege that the pistils must be fertilized by the stamens, *in order to produce that enlargement of the receptacle* which affords an *esculent substitute* for fruit,—then I have only to say, it is a *question of fact*, which I have had no adequate opportunity to determine; and concerning which I, for one, should be happy to receive reliable information. To ascertain the point satisfactorily, would require very careful experiments and observations. Whether such have been made, I am not informed. I may remark, however, by way of *analogy*, that there are instances in which *pistils*, and even *receptacles*, are enlarged, where no staminate influence has been exerted. The conglomerate coalescent *pistils* of the Osage Orange (*Maclura*), for example, attain to their full natural size (although the *seeds* are necessarily imperfect,) where no staminate plant is in the neighborhood: and, what affords a closer analogy, the including *receptacle* of the *pistillate Fig* is fully developed, when entirely free from any staminate influence. Whether the *receptacle* of the *Strawberry* ever enlarges, without the pistils being fertilized, (as already stated,) is more than I can tell; but I feel well assured, that any competent authority, who may furnish the information, will make an acceptable contribution to physiological Botany.

W. D.

West Chester, June 6, 1853.

For the Farm Journal.

FLUSHING, June 20, '53.

TO THE EDITORS OF THE FARM JOURNAL:—

I have perused an article from Thomas Meehan, in your last number, which seems to be evasive, and does not at all satisfactorily meet the question at issue. His first statement made in your April number, was that "*Hovey's Strawberry*," "usually classed as a *pistillate*," "*did become a staminate by being forced slowly in a moderate temperature*."

In reply, I did not merely declare such a result to be utterly impossible, but *I gave my reasons therefor*.

I furthermore called for the proof of Hovey's strawberry having produced fruit "*without the possible connection of some other variety naturally staminate*."

In Mr. Meehan's reply the name of "*Hovey's strawberry*" is not even mentioned, but he speaks of twelve runners taken from pistillate plants, of which seven produced perfect flowers and five pistillates, and that these twelve plants produced fruit. Comparing as they did, plants of both sexes, it would have been a miracle if they had not produced fruit. But the whole of those twelve runners were never obtained from the genuine Hovey's seedling strawberry, nor from any other single variety. They were runners from two distinct varieties (intermixed inad-

vertently without doubt.) I do not question that Mr. Meehan now supposes they were such as he has stated them to be. It will be found, however, on full investigation, that he commenced with a blunder of a similar description with that which confused Mr. Downing, who had a totally different variety (a staminate one) under the name of Hovey's seedling. As to the supposed anomaly spoken of in relation to McAvoy's Extra Red, and from which it is deduced 't' at this plant is also of a changeable character; it amounts to nothing more than to prove that the writer is ignorant of certain characteristics of that, and of at least a dozen other varieties, while it can scarcely be deemed ruleable that he should palliate one blunder by committing another. Their character has already been commented upon by horticultural writers, and being fully so in an article prepared by myself, and shortly to appear in the Horticulturist, I forebear present comments. I will merely say that their characteristics are *as immutable* as are those of every other variety of the strawberry, *in none of which has there ever been any change whatever*.

Yours very respectfully,

WM. R. PRINCE.

P. S.—I am willing to unite with Mr. Longworth, of Cincinnati, in placing \$1000 in deposit, to be paid over to any person who will produce *one perfect berry* from Hovey's Seedling strawberry, when grown by itself, with or without heat.

W. R. P.

The Pennock Corn Drill.

We have equally favorable accounts as the following, of the Pennock Corn Drill, from several of our Chester county friends, who gave it a thorough trial this spring. The advantages of drilling in corn are so manifest, that this implement must soon come into general use.

For the Farm Journal.

MR. EDITOR:—

I was tempted, by the notice in your April number, to purchase one of Pennock's new Corn Drills, and its performance has given such entire satisfaction, and so greatly exceeded my expectations, that I feel it a duty I owe the farming community to call their attention to this implement, that they may take advantage of it another season.

I have long been of the opinion that *drilling* in corn will supercede all other modes of planting, as soon as a *real good* drill is within the reach of every farmer at a moderate price. And I do pronounce the Pennock corn planter a *real good* one though not perfect, as I can suggest what in my opinion, would be an improvement, to wit: to arrange it so as to drop regularly and without fail, *one grain one foot apart*. This distance will allow more stalks on the ground without being *too close*, than any other mode of planting. The Pennock planter, as now constructed,

drops two to six grains every eighteen or thirty-six inches, as the operator may desire. I prefer the former distance, and I now have as handsome and evenly planted field of corn as the State of Delaware has ever produced. When my corn first came up it averaged over three grains to the hill—none too many perhaps, at first, as it is safest to make a liberal allowance for birds and worms. At the second dressing, I weeded it out to two stalks, allowing the most healthy and vigorous to remain.

Some of the advantages of drilling in corn are these:

1st. *Economy*.—I have over thirty acres in corn this spring; one man and a boy to ride the horse, drilled it in three days. It being our first attempt at using a drill, we lost half a day in experimenting, and "getting our hand in." Next season I will guarantee to put in thirty acres of corn in handsome style with this same drill, in less than two and a half days. To plant the same ground in the ordinary way would keep the man and boy busy enough during *ten days*, at least. Here then, besides the *time* gained for attending to other work, is a saving of the *whole labor* of planting, in the ordinary way, as you will plant the thirty acres with a drill in just the time required to "mark out" the ground before dropping the corn by hand.

2d. The corn is better put in, if I may use the phrase, in every respect. It is planted at a uniform depth, and therefore comes up evenly. The grains are dropped sufficiently close together, and the hills are in *straight lines*, and can be cultivated to better advantage. I can run my harrow-teeth as close as I please, to every stalk in every hill in the field. Every farmer knows the trouble of harrowing corn when dropped in the usual zigzag style of careless and tired boys.

3d. The corn is not so easily washed out of the ground by floods, as when planted in marked out furrows. One of my fields is on quite a hill-side, and though a heavy rain came on soon after it was planted, it required one man but a couple of hours to repair the damages, while my neighbor's corn in the next field was so much washed up, as to require several men a whole day to replant it.

4th. The birds are not so destructive to drilled corn as when planted by hand. It is a singular fact that the crows and blackbirds would wander over my fields searching for the hills, apparently taking no notice of the young corn peeping through the level ground. In a few spots where the corn was cut off by worms, and replanted, they would invariably find it, and pull it out. They seemed to think, that unless the corn was in hillocks it was not genuine, or worth pulling up. Whether they will "progress" with the age, and discover that corn is corn, whether planted by hand or by drill, remains to be seen.

Other advantages might be named, Mr. Editor,

but I have trespassed enough upon your columns already. I will close with the prediction, that in a few years every good farmer will as soon think of doing without a plow as without a corn drill.

A DELAWARE FARMER,

New Castle county, June 18.

For the Farm Journal.

Summer Range for Small Families.

MR. EDITOR:—

A range in the country during the summer season is always pleasant. Ranges in town have also become fashionable, the only drawback to their introduction into general use, being their size and expense. Some of our readers, who for want of room or other conveniences, are compelled to use the large cooking stove the whole year round, will thank us for informing them that Messrs. North, Chase & North, 390 Market street, Philadelphia, manufacture an exceedingly neat and convenient summer kitchen range, which is so compact as to admit of being set into almost any fire-place, and yet so conveniently arranged as to allow of washing, baking and general cooking, to almost as great an extent as the large cooking stove. We purchased one complete for seven dollars, which we find enables us to keep our house cool, reduce greatly our expense for coal, while the culinary operations of the family are performed as rapidly and well as formerly. We consider it a perfect article this hot weather, and take pleasure in directing the attention of our readers to it. S.

For the Farm Journal.

Sowing Corn Fodder.

MR. EDITOR:—

I read, enjoy, and profit by your Journal, but am occasionally puzzled for the want of the *little more* information which would make some of your articles intelligible, for instance: an interesting communication upon the subject of growing corn for fodder solely, tells when and how to plant, &c., but not *when* to cut. Can you supply the omission?

Again: Mr. Mumma treats of the beautiful effect produced by grafting the Rose Acacia upon the "Yellow Locust"—*what is the yellow locust?* is a question which has puzzled myself and neighbours.

If correspondents in presenting new articles, of new modes of culture, would but reflect that in order to make their information of value, it becomes necessary to *impart the whole of it*; much more satisfaction would ensue than from a vague or partial statement, which leaves the more material parts to be guessed at, or the subject of an experiment, oft-times causing that to be abandoned, or left untried, which a few more words of explanation would have made intelligible and valuable to those who seek information from books. RUS.

The time for cutting corn sowed for fodder, is

early in the Fall, say for this region middle to last of September. As much depends on the season, time of sowing, &c., it is difficult to be more definite. If cut green and before growth is *matured*, more care will be required in curing, same as with hay. As it is very liable to heat, when put in the mow, we prefer making small shocks in the open field, to stand till winter, when they can be hauled to the barn-yard as wanted. If the ground must be cleared, make small stacks, convenient to the barn-yard, with a rail in the centre, placed upright for ventilation.

In respect to the locust, for grafting the rose *acacia* on, we presume Mr. Mumma, means the common locust, "*Robinia Pseudoeacia*," which unites readily with the other. Its blossoms are white. We know of no locust with yellow blossoms.

The hints about correspondents being more precise in telling "the whole story," are well worth attending to.

For the Farm Journal,

Augusta Rose.

TO THE EDITORS OF THE FARM JOURNAL:—

Can you or any of your correspondents, inform us any thing about the Augusta Rose, said to be "a deeper yellow than Chromatella, more vigorous grower than Lamarque, and more fragrant than *Devoniensis*." I presume it must have flowered in or around Philadelphia, the present spring, and some of us hereaway, who take no little pride in our collections of roses, are quite anxious to know whether this high flown description is sustained by fact.

J. GIBSON, Lancaster city.

We have not yet seen the Augusta Rose, and cannot answer the enquiry. James D. Fulton, of Philadelphia, is one of the agents for its sale. Perhaps he or some one who has seen it in bloom, can answer.

Col. Sherwood's Sale of Durham Cattle.

We copy from the Auburn State Gazette, the following account of this sale, about which there has been much interest felt by farmers and breeders. The prices are liberal and encouraging.

Yesterday, the 8th, the sale of a herd of twenty-nine pure bred short-horned Cattle, bred and owned by Col. J. M. Sherwood, of this city, was sold at auction at his farm adjoining the west part of the city. James M. Miller, of New York, acted as Auctioneer, and the sale commenced at 1 o'clock, P. M.

The following is a list of the cows sold, with the set up price of each, the sum they sold for, and the name of the purchasers:—

Pansy 3d, a 7 year old, set up price \$300, sold for \$450—purchased by J. T. Brasse, of Ohio.

Pansy 4th, a 3 year old, set up price \$300, sold for \$525—purchased by Peter Lorillard, of Westchester county, New York.

Phantom, a 6 year old, set up price \$200, sold for \$210—purchased by J. J. West, Illinois.

Phantom, 2d, a 3 year old, set up price \$300, sold for \$500—purchased by Mr. Clemens, of Philadelphia.

Phantom 3d, calved April 24, 1853, set up price \$150 sold for \$175—purchased by Mr. S. Bush, Sullivan county, Ohio.

Ozema, a 5 year old, set up price \$200, sold at \$240—purchased by J. T. Brasse, Ohio.

Ozema 2d, calved Dec. 27, 1852, set up price \$150, sold at \$165—purchased by J. W. Titus, Dutchess county, N. Y.

La Polka, a 5 year old, set up price \$200, sold at \$215—purchased by do.

La Polka 2d, calved April 9, 1853, set up price \$150, sold at \$170—purchased by do.

Poppy, a 7 year old, set up price \$200, sold at \$225—purchased by do.

Poppy 2d, a 3 year old, set up price \$250, sold at \$295—purchased by S. Bush, Sullivan county, Ohio.

Nightshade, a 6 year old, set up price \$200, sold at \$260—purchased by Mr. Clemens, of Philadelphia.

Pet, a 6 year old, set up price \$300, sold at \$310 purchased by J. W. Titus, Dutchess county, N. Y.

Pet 2d, a 3 year old, set up price \$300, sold at \$400—purchased by Wm. Kelley, of Rhinebech, N. Y.

Pet 3d, calved March 23, 1853, set up price \$150, sold at \$300—purchased by John Foster, U. C.

Nymph, a 9 year old, set up price \$200, sold at \$220—purchased by Mr. S. Ward, Westchester county, N. Y.

Topsey, calved March 28, 1852, set up price \$150, sold at \$160—purchased by J. T. Brasse, Ohio.

Sarah, a 2 year old, set up price \$100, sold at \$125—purchased by Mr. Fellows, of Sennett.

The following is a list of the Bulls, in the catalogue, that were sold, viz:—

Vane Tempest, bred by John Stephenson, Esq., of Durham, England. Col. Sherwood imported him in 1850; set up price \$1000, sold at \$1070—purchased by J. R. Robinson, Wisconsin.

La Fayette, 1 year old, set up price \$300, sold at \$310—purchased by do.

Gen. Putnam, a 2 year old, set up price \$300, sold at \$300—purchased by J. J. West, Illinois.

Powhatan, 1 year and over old, set up price \$300, sold at \$300—purchased by H. Bradley, Westchester county, N. Y.

Novelty, 1 year and over old, set up price \$200, sold at \$215—purchased by J. R. Robinson, of Wisconsin.

Petrarch, 1 year and over old, set up price \$300, sold at \$400—purchased by J. T. Brasse, Ohio.

Pope, calved January 24, 1853, set up price \$200, sold at \$230—purchased by J. R. Robinson, Wisconsin.

Dragon, a 2 year old, set up price \$100, sold at \$130—purchased by A. Beech, Westchester county, N. Y.

Dandy, a 1 year old, set up price \$150, sold at \$170—purchased by J. R. Robinson, Wisconsin.

Irishman, calved March 18, 1853, set up price \$100, sold at \$132—purchased by A. Beach, of N. J.

Locofoco, calved March, 1853, set up price \$75, sold at \$90—purchased by A. Beach, of N. J.

There were about two hundred spectators and some thirty bidders at the sale, and the bidding was spirited. The bidders and purchasers were from all parts of the country, and the sales all bona fide.

Before the sale took place Col. Sherwood had provided a sumptuous dinner for all who should be in attendance, at which about 200 sat down and partook, refreshing themselves with the generous hospitality of Col. S. So determined were the bidders at the sale after dinner, that the aggregate amount of the whole cattle sold exceeded the set up price \$1570. It will be seen that few of the cattle set up, but what was bid in at an advance, thus causing

our distinguished cattle breeder to realize a handsome bonus. It was an important sale of the very best breed of cattle in the country, and drew together from a distance many anxious purchasers, knowing

as they did from the wide spread reputation of Col. Sherwood, that the animals put up were pure bred, and no mistake.



Fancy Lop-Eared Rabbits.

Mr. Geo. P. Burnham, of Boston, Mass., advertises his imported *Lop Ear Rabbits* in the *Journal* this month. The engraving is a likeness of this stock, drawn from life, and exhibits the general character and form of this favorite race of animals.

In a late number of the "*N. E. Farmer*," we find the following allusion to this breed, from the pen of Mr. B.

MR. EDITOR:—

Above I hand you a drawing from life of a doe and young, of the *English Lop-Eared Rabbits*—such as are now bred to a wide extent in Great Britain, and which are very highly esteemed for the table, when fattened, or as pets with amateurs.

This tribe are beautiful creatures, are very easily reared, and have proved a most interesting addition to the stock of fanciers who have bred them. In England, they receive a good share of attention, and clubs exist there in all the large cities and towns who hold annual exhibitions, at which a good deal of competition is evinced for superiority.

My stock I imported last spring from London, Liverpool and Dublin; and I shall be happy to show it to those interested, at my residence, in Melrose. The peculiarities of this race consist chiefly in their great size, their fine colors, and their long pendant ears. They are exceedingly prolific—breeding six or seven times in a year—and may be kept advantageously in a very small space.

My rabbitry occupies a building twelve by thirty feet. The animals in hutches three feet long and

two feet wide. These hutches, (or apartments,) are ranged in tiers, one over another, five on a tier; and each rabbit occupies a separate hutch. The young are taken from the mother at four to six weeks old, and are afterwards kept together (six to ten,) in a large hutch, in a separate room of the rabbitry. They are ready for breeding at six to eight months old.

I am not aware that these pretty animals are now very extensively bred in this country, Mr. Rotch, of Morris, N. Y., and Mr. Rodman, of Dedham, being the only gentlemen that I know, who have fine stock; yet I think we shall very soon see more of them, from the fact that there is at present a good deal of inquiry for them, at home and abroad.

I am yours, &c.,

GEO. P. BURNHAM.

Poppies.

Dr. J. V. C. Smith, of Boston, says that immense crops of poppies are raised in Switzerland, not only for the opium, but for the oil extracted from their seeds. This oil is beautifully transparent, extensively used in house painting, colorless as water, and when mixed with white lead, leaves a beautiful surface that never becomes yellow. Now that linseed oil is raising in price, and as much of our land is unfit for the cultivation of flax, he advises the attempt at cultivating the poppy here, which does very well even on poor, sandy soil.—[Exchange.]

Agricultural knowledge is always desirable and useful.

Work for the Month.

FARM.—This month and the latter part of the preceding, embraces the period of hay and harvest, the most critical and anxious for the farmer of the whole year. Activity, energy, judgment, as well as all the physical help that can be mustered, will now be wanted, and in one department or another, every man, woman and child WILL BE FORCED TO TURN VOLUNTEER. As a consequence, many things requiring attention, as well as hay and grain, are apt to be neglected, such as corn, potatoes, and all root crops, and the vegetable garden. Weeds are too frequently allowed to hold possession and keep growing till harvest is over, to the serious detriment of the crop. Whenever practicable we think an extra hand, employed especially to keep the cultivator going for a month or six weeks, would save much subsequent labor, as well as secure a much heavier yield. It is highly important that there should be no cessation of growth at this period, to prevent which, constant stirring of the soil is indispensable. Hay should not be *made* too much in the field, by frequent turning over, and consequent drying, as used to be more customary than now, much of the strength and quality is thus impaired. The free use of salt in the mow or stack, will obviate danger from heating. Grain should be cut before being dead ripe, at least a week. This has been fully proved, to make greater weight, and finer quality of flour, as well as to make the straw more valuable as provender. *If any rule* can be given for cutting, it is when the stem becomes white and begins to shrink, just below the ear, and when the grain on being pressed between the fingers, is about the consistency of dough.

As a drink for the harvest field, molasses and ginger, with vinegar and water, in proportions to suit the taste, are a wholesome substitute for alcoholic stimulants, now generally discarded. Judge Buel used to recommend oat meal and water, as a whole some and cooling beverage for this season.

Ruta Baga crop should be sown the first week in this month, in ground previously well ploughed, pulverized and manured.

FRUIT ORCHARD.—Dig or plough ground between strawberry rows, to keep down weeds, and allow runners to take root freely. Continue pinching and summer pruning process, for fruit trees, as directed in last month. The shape of the tree, as well as number of fruit bearing branches, can thus be easily regulated.

Cut out superfluous growth of grape vines, and also stop the shoots containing hunches, to increase their size.

Summer pruning has been heretofore too much neglected. The plain, common sense method, of stopping the *growth* of branches by pinching out the terminal bud at the precise point required, and thinning out superfluous shoots *as soon as they appear*,

instead of allowing them to grow into *limbs*, to be subsequently pruned or sawed off, thus making a perfectly useless waste of growth and vigor of the tree, will commend itself to all. Pruning, properly understood, comprises much of the *art* of fruit growing. We have no hope of its importance being appreciated, till this has become more of a *business* with farmers, than it now is. Judicious pruning will then become as indispensable to be attended to in proper season, as hoeing corn, sowing grain, or cleaning out weeds.

General pruning of trees, where it has been neglected in winter or spring, may now be attended to *if there is time*. We have found that at midsummer, when the tree is in its full vigor, the wounds heal over readily, and quickly without injury. In shaping young trees, the plan of low heads, say five feet from the ground, is to be recommended. This promotes convenience of picking the fruit, and is highly useful in shading the trunk from the effect of the hot sun.

The blight in Pear trees should now be watched for, and the limbs amputated immediately below the parts affected. We observe this season an unusual amount of the slug on the leaves of the Pear tree. Unleached ashes, or air-slacked lime, dusted over the tree, is a certain remedy, to be repeated, if necessary.

Budding of Pears and Plums may be performed this month, at any time when the bark separates freely from the wood. If the weather is dry, and there is danger sap may stop flowing, before buds are mature, cultivate and work the soil around the trees to produce continued action of the sap vessels.

Shake or jar quickly Plum trees every morning, and collect for burning or feed to the hogs the fruit which falls, containing the eggs of the curesilio. Were this plan adopted by all cultivators, the ravages of the "little turk" would be sensibly diminished. Whenever practicable, hogs and poultry should have the run of the fruit orchard, to eat up the fruit which falls prematurely.

VEGETABLE GARDEN.—Attend to directions of last month. Transplant during damp spells of weather, cabbages, cauliflower, celery, as before directed. This latter should first be pricked out of seed bed, and transplanted to a prepared piece of ground, before final removal into trenches. Try salt for this crop. Sow endive, small saladina, summer radish, ruta baga seeds, &c. Plant cucumber seed for pickles. At last of month some spinach and lettuce may be sown for autumn use.

Cut off and dry for use, such herbs as come into flower.

Peas maybe planted for Fall crop, also sugar corn, for table use or marketing.

The main turnip crop should be planted in drills the last of this, and the beginning of next month.

Gather all seeds as they ripen, and hang them up in a dry, airy place.

Stir and pulverize the ground thoroughly between all vegetables, to promote their growth, and keep down all weeds.

Sow plaster and ashes over hills of cucumber, squashes, pumpkins, &c.

Where plants require water, it should be done in the evening.

WORK FOR FLOWER GARDEN.—Attend to mowing grass plots, hoeing and raking flower bed and walks. Tie up carefully the young shoots of running roses and other creepers. Peg down verbenas and petunias as they continue to grow. They will flower much better when tied up to stakes. Tulips, hyacinths and bulbous roots generally may be lifted this month. Supply their places with the last sowing of annuals. As soon as the hybrid perpetual roses are out of bloom, prune the young shoots, back to within three or four buds of the old wood. It will cause them to start growing again and produce bloom. Cut the seed pod of all perpetual roses, as soon as they have shed their bloom.

Pennsylvania Horticultural Society.

The stated meeting of this society, was held on Tuesday evening, June 21st, in the Chinese Saloon, Philadelphia, Gen. Patterson, Preside it, in the chair. The display was remarkably fine, in each department. Among the plants might be mentioned in special commendation a few only. In Mr. Buist's collection were *Medinilla magnifica* in flower, and really very handsome, and *Tecoma jasminoides rosea*, both presented for the first time, and Fuschias, Voronia, with others. In Mr. Lennig's were a fine plant of *Gardenia Stanleyana*, in flower; also *Clerodendron Bethuniana*, and *Medinilla Seiboldii*, new, and shown for the first time, and a beautiful collection of Gloxinias. In John Bell's, West Philadelphia, were *Delphinium Hendersonii*, *Siphocampylos*, *Nitidos*, *Achimenes Beaumannia*, *A. grandidissimia Tillandsiasp.* from Mexico, new, and brought for the first time; *Nurembergia gracilis*, fine specimen, and six new Gloxinias. In Mr. Cope's—were *Siphocampylos Nitidos*, and *Eranthemum semperflorens*, of recent introduction, six beautiful Fuchias, a dozen choice plants, and cut Carnations. In W. W. Keen's West Philadelphia, were six choice Fuchias, and a dozen select plants. Mr. Dundas' gardener—A handsome array of a dozen *Fuchias* on one table and six *Gloxinias*, choice sorts with *Calceolarias*, etc. H. Pratt McKean's gardener, Torrisdale—Six of the finest *Fuchias* shown. Robert Cornelius' gardener brought a well grown plant of *Campanula Pyramidalis* in profuse bloom. Boquet designs and baskets were exhibited by Thomas Meehan, Mr. Cope's gardener—Thomas Meghran, Mr. Cornelius, John Bell, and Robert Kilvington, all in good taste. Mr. Meehan's basket had a full blown flower of the Victoria Regia, the 113th from the same plant. Beautiful cut seedling Verbenas were shown by T. F. Croft.

The fruit table presented a tempting sight, and contained black Hamburg and white Frontignac grapes, the Eliza, Druid Hill, Early York and George 4th peaches, the Downtown, Early Newington and Pitmaison Nectarines; the Shanghai Peach, believed

the first shown in America—all from Mr. Cope's Conservatory, three Bunches of White Sweet Water Grapes, from A. J. Smith, gardener at Eden Hall. A rich display of nine dishes of Cherries from Mrs. J. B. Smith, viz: Royal Hative, Bigarrean Cœuret, Burr's Seedling, Gobet, Belle Magnifique, Royale, Montmorency, Griotte and Mayduke. Isaac B. Baxter had the Gross Hative, Guigne Noir, Black Heart, and Mayduke cherries—a dish of the Col. Wilder Raspberries, Gooseberries 32 to the pound, and White and Red Currants. J. F. Knorr, four kinds of Currants. J. M. Tage, a dish of the Moyamensing Strawberry. Wm. Hobson, the Early Richmond and Black Tartarean Cherries. Dr. Brinckle, Raspberries, viz: Mrs. Ingersoll, Mrs. Wilder, Gen. Patterson, Longworth, Emily and No. 35 H., and Dr. J. K. Mitchell Seedling Raspberries.

The two large vegetable tables were furnished by Mr. Cope's and Mr. Cornelius' gardeners, and did each of them credit.

James Ridings exhibited a case containing prepared pestiferous insects, which he had collected this season. It attracted attention, and contained the Borers of the Maple tree, the Linden, the Apple and Quince, the Cherry and Locust, the Ash, the Cherry and Ash, the Peach, the Currant and Gooseberry and the Squash.

Premiums awarded on this occasion were:

By the Committee on Plants and Flowers, viz:—*Gloxinias*—For the best six to James Bisset, gardener to James Dundas; for the second best to John Bell, West Philadelphia. *Fuchias*—For the best six, to A. Burnett, gardener to H. Pratt McKean. *Plants in Pots*—For the best twelve, to Thomas Fairley, foreman to R. Buist; for the second best, to William Grassie, gardener to Wm. W. Keen; for the third best, to John Bell. *Plant in a Pot*—For the best grown specimen *Gardenia Stanleyana*, to John Pollock, gardener to F. Lennig. *Plants shown for the first time*—A premium of \$5 to Thos. Fairley, foreman to R. Buist, for five plants in bloom of *Medinilla magnifica* and *Tecoma jasminoides rosea*; a premium of three dollars to John Bell, for *Delphinium Hendersonii*, six very beautiful Gloxinias, and two Achimenes; a premium of two dollars to John Pollock, gardener to F. Lennig, for *Clerodendron Bethuniana* and *Medinilla Seiboldii*; a premium of one dollar to Thos. Meehan, gardener to C. Cope, for *Eranthemum Semperflorens* and *Siphocampylos nitidos*. *Boquet designs*—For the best to Thos. Meehan; for the second best to Thos. Meghran, gardener to R. Cornelius. *Basket of Cut Flowers*—for the best to the same; for the second best to Robert Kilvington; for the best of Indigeneous flowers, to Thos. Meehan; for the best hand boquet, to John Bell. And a special premium of one dollar to Thos. Meehan for a box of Carnation flowers. The Committee notice as deserving special attention, a very fine specimen in John Bell's collection of *Delphinium*, Beauty of Charrone, a hardy herbaceous plant recommended as a very desirable bloom of great duration.

By the Committee on Fruits. For the best Black Hamburg and White Muscat of Alexandria Grapes, to Thos. Meehan, gardener to C. Cope; for the best Cherries, Burr's Seedling, and for the second best, Belle magnifique, to Francis Gouin, gardener to Mrs. J. B. Smith. The attention of the Committee was especially attracted by a small quantity of the fine strawberry, the Moyamensing seedling, by J. M. Tage; nor can they omit to notice the superior collection of Peaches, Apriots and Nectarines, for which they award a special premium of three dollars to Thos. Meehan; and fine varieties of currants, for

which they award a premium of two dollars to J. F. Knorr. They also notice choice varieties of Seedling Raspberries, from the gardens of Dr. Brinckle and Dr. Mitchell.

By the Committee on Vegetables. For the best display of Vegetables; by an amateur gardener, to Thos. Meehan, gardener to C. Cope; for the second best, to Thos. Meghran, gardener to R. Cornelius.

AD INTERIM REPORT.

PHILADELPHIA, June 16, 1853.

To the President of the Pennsylvania Horticultural Society

The Fruit Committee, in presenting their usual monthly ad interim Report, would remind the Society that, at the stated meeting of last month, specimens of two new Grapes (one a seedling of the *Black Hamburg*, the other the *Musque Verdel*), were exhibited by the originator, J. Fisk Allen, of Salem, Massachusetts. Wishing to have an opportunity of carefully examining these two varieties, the Committee only noticed them cursorily in their regular Report for that evening, with a promise of submitting a more detailed pomological description of them in their June ad interim Report. The specimens having been winter forced, and being ripe in March, were kept too long after their maturity to be in their greatest perfection.

ALLEN'S SEEDLING BLACK HAMBURG.—The bunch exhibited was not very large, though it is probable there will be an improvement in this respect. *Berry* large, black, oval; seed grey; flesh solid, and possessing much of the character of the *Black Hamburg*; quality "very good."

MUSQUE VERDEL.—This is a natural cross between the Grizzly Frontignan and the Verdelho, the Wine Grape of Maderia. *Bunch* large, shouldered, loose; *berry* rather small, about half an inch in diameter, round, pale red; seed light cinnamon color; flavor rich, saccharine, highly perfumed, quality "best;" said to be as early as the *Black July*, and the *Pitmaston*.

Mr. Allen deserves the thanks of Pomologists for having originated two varieties of Grapes of such excellence. And being of native origin, they may prove, for out-door culture, better suited to the requirements of our climate than their transatlantic parents.

From H. W. S. Cleveland, of Burlington, N. J.—Fine specimens of Strawberries, without a name. *Fruit* large; roundish, sometimes ovate; dark red; seed of the same color, set in superficial depressions; calyx reflexed; stamens persistent; flesh yellowish white saccharine, high flavored; quality "best." The *fruit* and *leaf* clearly indicate the variety to be a *Hautbois*, probably the Lafayette. It is to be regretted that this luscious class of Strawberries is so little cultivated.

From Mr. Stuart.—Beautiful specimens of Strawberries, *Horey's Seedling*, of last year's planting; some nearly four inches in circumference; quality "very good."

From Gerhard Schmitz, of Philadelphia.—Fine specimens of two of his *Seedling Strawberries*:

1. **THE PENNSYLVANIA.**—This variety is a seedling of the *Moyamensing*, and was exhibited by Mr. Schmitz last season, for the first time. *Fruit* large; broadly conical; dark crimson; seed crimson, and when shaded, yellow, set in depressions not very deep, with roundish intervals; flesh red; flavor fine; quality "best;" sexual character *pistillate*; leaf large, deep green, serratures crenate. The Committee award a premium of five dollars to this variety, as the best

new American Seedling Strawberry of superior quality, after two years' trial.

2. **SCHMITZ'S No. 3.**—A Seedling of the *Washington*, exhibited now for the first time. *Fruit* large; roundish ovate, sometimes inclining to conical; light crimson; seed crimson, often yellow, set in rather deep indentations, with intervals somewhat ridged; flesh pale red; flavor pleasant, quality "very good;" sexual character *pistillate*. Leaf large, light green.

From Caleb Cope.—Specimens of four varieties of Strawberries:

1. **McAVOY'S SUPERIOR.**—This variety originated with Mr. McAvoy, of Cincinnati, and was formerly known as his No. 12. In May, 1851, it received a premium of \$100 from the Cincinnati Horticultural Society. Mr. Cope's specimens were of great size and beauty, some of them measuring *five and a half inches in circumference*. *Fruit* very large; roundish ovate, occasionally slightly necked; deep brilliant crimson; seed crimson, sometimes yellow, set in indentations not deep, except in the largest specimens, when the intervals are also somewhat ridged; flesh red; flavor exquisitely fine; quality "best;" sexual character *pistillate*.

2. **McAVOY'S No. 1.**—Large; roundish, deep scarlet; light crimson seed; indentations rather deep, intervals not ridged; flesh whitish, partly stained with red; flavor agreeable; quality "good," perhaps "very good;" sexual character *pistillate*. An abundant bearer.

3. **McAVOY'S EXTRA RED.**—Large; roundish; scarlet; seed red, sometimes yellowish; indentations tolerably deep, intervals somewhat rounded; flesh yellowish, slightly stained; sub-acid flavor, quality only "good;" *pistillate*; extraordinarily productive.

4. **LONGWORTH'S PROLIFIC.**—This fine variety originated with Mr. Schneicke, of Cincinnati, and was formerly known as Schneicke's *Hermaphrodite*. Very large; roundish ovate; brilliant crimson; seed of the same color, sometimes yellowish, set in rather deep indentations with rounded intervals; flesh red; flavor fine; quality "very good." A variety of great excellence; perfect in its sexual organization, and remarkably productive, a rare circumstance with staminate varieties of large size.

From Robert Buist.—Fine specimens of two varieties of Strawberries, McAvoy's Superior and McAvoy's No. 1, described above.

From Henry A. Dreer.—A dish of the *Moyamensing Strawberry*. This fine variety originated with Gerhard Schmitz, of this city, and took the premium offered by the Pennsylvania Horticultural Society, for the best seedling strawberry exhibited in 1848. *Fruit* rather large; roundish conical; deep crimson; seed crimson, set in rather deep depressions, with rounded intervals; flesh red; flavor very fine; quality "best;" sexual character, *pistillate*; leaf large, with crenate serratures.

From Dr. E. W. Carpenter, Lancaster.—*The Triumph of Cumberland* cherry, a native of Cumberland county, Pennsylvania. Specimens fine. Large; obtuse heart-shaped, sometimes roundish, compressed at the sides; deep crimson, almost purple when fully ripe; suture indistinct; stem rather long, slender, inserted in a broad open cavity; apex slightly depressed; stone roundish oval, compressed; flesh rather solid, red, slightly adherent to the stone; flavor fine; quality "best;" period of maturity about the middle of June.

The Treasurer submitted his semi-annual statement, which was read and referred.

Charles Kessler, of Reading, was elected an hon-

orary and corresponding member, and four gentlemen contributing members.

Adjourned.

THOS. P. JAMES, Recording Secretary.

Chester County Agricultural Society.

At an adjourned meeting of the Chester County Agricultural Society, held at the Court House, in the borough of West Chester, on the 18th day of June, A. D., 1853, John Parker was called to the Chair, and Alexander Marshall appointed Secretary.

John S. Lowen, Esq., from the committee appointed for the purpose at a former meeting, reported the following named officers for the permanent organization of the Society, which were unanimously elected, to wit:

PRESIDENT—Isaac W. Vanleer.

VICE PRESIDENTS—Paschall Worth, John D. Evans, Dr. Ebenezer V. Dickey, Lewis Brinton.

EXECUTIVE COMMITTEE—Abraham R. McIlvaine, Dr. Isaac R. Walker, Joseph Dowdall, Gen. George Hartman, Nathan Walton, Jacob Massey, Wm. C. Dripps, John Parker, Abner Garrett, John J. Monaghan.

CORRESPONDING SECRETARY—J. Lacey Darlington.

RECORDING SECRETARIES—Alexander Marshall, Jas. H. Bull.

TREASURER—Dr. George Thomas.

On motion, Resolved that John S. Bowen, Esq., be a committee to appoint a committee consisting of one member from each township, to obtain members to this Society, collect the initiation fee, (fifty cents,) and pay the same over to the Treasurer. Mr. Bowen to publish the names of said committee as soon as completed.

On motion, John S. Bowen, Esq., Dr. E. V. Dickey, and Hon. A. R. McIlvaine were appointed a committee to report to the Corresponding Secretary on the prevalence and injurious effects of the fly in wheat.

On motion, Dr. E. V. Dickey, Samuel Pennock, and Alban Webb were appointed a committee on the subject of deep plowing, and instructed to report to the Corresponding Secretary.

On motion, Dr. I. R. Walker, Smith Sharpless, and Lewis Brinton were appointed a committee, and instructed to report to the Corresponding Secretary, on the potato plant, its best varieties and modes of culture.

On motion, the Corresponding Secretary was instructed to make report on the culture and profitable character of the barley crop.

On motion, Benjamin J. Passmore, Dr. E. V. Dickey, and William Webb were appointed a committee, and instructed to report to the Corresponding Secretary, on the utility of guano as a manure.

On motion adjourned.

JOHN PARKER, Chairman.

A. MARSHALL, Secretary.

The first annual exhibition of the above Society now fully organized, will be held on the 15th, 16th, and 17th of September next, in West Chester, at the same time as the Horticultural Exhibition. From the amount of improved stock, of all kinds in the county, as well as manufactories of agricultural implements, it is expected it will be an interesting affair.

Soap Suds.

The value of this liquid as a stimulant of vegetation does not appear to be generally appreciated by our agriculturists, many of whom make no use of it, although from their well known habits of enterprise and economy in other matters, we should have been led to expect better things. In a state of incipient putridity, soap-suds is replete with the element of vegetables, in a state of actual and complete solution; the only condition, indeed, in which it is susceptible of absorption and assimilation by the roots of plants. Besides its value as a powerful stimulant, it possesses also, very potent anthelmintic properties, and when used in the irrigation of garden and field crops—the best way, perhaps, in which it can be applied to vegetables—operates as a speedy and effectual remedy, against the ravages of bugs, worms, and most of the aligerous or winged depredators, by which vegetables are so often infested and destroyed. It is also, a most valuable adjuvant in the formation of compost. For this purpose a large tank or vat, capable of holding from three to four cart loads, should be constructed in some place easy of access, and to which, without difficulty, the wash from the sink and laundry can be regularly conveyed. Into this reservoir all the wash matter produced on the farm and about the mansion, should be thrown—bones, refuse, ashes, muck, turf, rich soil, and chip-manure from the wood-shed; in short, every substance capable of absorbing the rich, fertilizing liquid, and retaining it for the benefit of the soil and plants to which it is to be applied.

By a little systematic attention to matters of this nature, the annual produce of our agriculture might be immeasurably increased, and the productive capacity of many farms, now regarded as almost worthless, placed on a footing equal, if not superior, to that of the most fertile. Nature has every where supplied in munificent abundance the means of fertility, and we have only to appropriate and apply them judiciously, to secure the best and most flattering results.

Some agricultural writers have estimated the value of a hogshead of suds, in a state of incipient putridity, to be very near equal to that of a cord of prepared manure. This is probably an over estimate: yet no one who has applied suds to vegetation, and carefully observed the results, can be otherwise than convinced of its very great efficacy and value. Where it is used in composting operations, it may be applied in its crude state, before fermentation has taken place. It will ferment in the heap, and thus induce a powerful chemical action in the ingredients, which will be in proportion as to power, to their number and character, and the manner or rather thoroughness with which they are intermixed. With a sufficiency of soap-suds and urine, a valuable compost may be made of any soil, even sand.—[Farmer and Mechanic.

Tea Culture.

The Rochester American says, that a gentleman who has carried on both the cultivation of the tree, and the manufacture of tea from their leaves for years, and some of the time employed two hundred men at the work, has left that place, after an extensive examination of the soil and climate of the South, for China and the East Indies, expressly to import a stock of young plants, superior in every respect to those cultivated by the late Dr. Junis Smith, at Greenville, South Carolina.

List of Premiums.

For the approaching State Agricultural Exhibition at
Pittsburg—September 27, 28, 29 and 30th, 1853.

CLASS No. 1—CATTLE.

No. 1, SHORT HORNS.

BULLS.

For best Bull 3 years old and up-wards,	\$10	Best Bull between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Bull between 2 & 3 years,	5	Best Bull Calf under 10 months,	5
Second best do do do	3	Second best do do do	3

COWS.

Best Cow 3 years old and up-wards,	\$10	Best Heifer between 1 and 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Heifer between 2 & 3 years old,	5	Best Heifer Calf under 10 months,	5
Second do do do do	3	Second best Heifer Calf do	3

No. 2, DEVONS.

BULLS.

For best Bull 3 years old and up-wards,	\$10	Best Bull between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Bull between 2 & 3 years,	5	Best Bull Calf under 10 mos,	5
Second do do do do	3	Second best do do do	3

COWS.

Best Cow 3 years old and up-wards,	\$10	Best Heifer between 1 and 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Heifer between 2 & 3 years,	5	Best Heifer Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

No. 3, HEREFORDS.

BULLS.

For best Bull 3 years old and up-wards,	\$10	Best Bull between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Bull between 2 & 3 years,	5	Best Bull Calf under 10 months,	5
Second best do do do	3	Second best do do do	3

COWS.

Best Cow 3 years old and up-wards,	\$10	Best Heifer between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Heifer between 2 & 3 years,	5	Best Heifer Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

No. 4, Ayrshire.

BULLS.

For best Bull 3 years old and up-wards,	\$10	Best Bull between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Bull between 2 & 3 years,	5	Best Bull Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

COWS.

For best Cow 3 years old and up-wards,	\$10	Best Heifer between 1 and 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Heifer between 2 & 3 years,	5	Best Heifer Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

No. 5, HOLSTEIN.

BULLS.

For best Bull 3 years old and up-wards,	\$10	Best Bull between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Bull between 2 & 3 years,	5	Best Bull Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

COWS.

For best Cow 3 years old and up-wards,	\$10	Best Heifer between 1 and 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Heifer between 2 & 3 years,	5	Best Heifer Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

No. 6, ALDERNEY.

BULLS.

For best Bull 3 years old and up-wards,	\$10	Best Bull between 1 & 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Bull between 2 & 3 years,	5	Best Bull Calf under 10 months,	5
Second best do do do	3	Second best do do do	3

COWS.

For best Cow 3 years old and up-wards,	\$10	Best Heifer between 1 and 2 years,	\$10
Second best do do do	5	Second best do do do	5
Best Heifer between 2 & 3 years,	5	Best Heifer Calf under 10 mos,	5
Second best do do do	3	Second best do do do	3

No. 7, NATIVES OR GRADES.

BULLS.

For best Bull 3 years old and up-wards,	\$12	Third best Bull bet'n 2 & 3 yrs	\$4
Second best do do do	6	Best Bull between 1 & 2 years,	6
Third best do do do	4	Second best do do do	4
Best Bull between 2 & 3 years,	10	Third best do do do	2
Second best do do do	8	Best Bull Calf under 10 months,	3
		Second best do do do	1

COWS.

For best Cow 3 years old and up-wards,	\$12	Third best Heifer bet'n 2 & 3 yrs	\$4
Second best do do do	6	Best Heifer between 1 & 2 years	6
Third best do do do	4	Second best do do do	4
Best Heifer between 2 & 3 years,	10	Third best do do do	2
Second best do do do	8	Best Heifer Calf under 10 mos,	3
		Second best do do do	1

No. 8, WORKING OXEN.

For best team of 20 yoke from members of any county Society, (Premium to be paid to the County Society entitled there- to.)	\$50	to the County Society entitled thereto,	\$30
Second best team of 20 yoke from members of any County Society, (Premium to be paid		Best team of Oxen not less than 3 yoke,	15
A cart will be provided to test the working qualities of the Oxen.		" yoke of Oxen,	12
		Second best do do	10
		Third do do	8

No. 9, FAT CATTLE.

For best pair fat Steers or Oxen	\$15	Second best do	\$5
Second best do do	10	Best Fat Steer,	15
Best Fat Cow,	10	Second best do	10
Second best,	5	Third best do	5
Best Fat Heifer,	10		

Applicants for premiums for fat cattle, must furnish statements of manner of feeding.
Judges on Fat Cattle, will give particular attention to the animals submitted to them for examination. It is believed that all other things being equal, those are the best cattle that have the greatest weight in the smallest superfluous. The Cattle to be judged as Fat Cattle, will all be weighed, and the Judges will take measures to get the superfluous of each.

No. 10, MILCH COWS.

For best Milch Cow,	\$20	Second best Milch Cow,	\$15
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The Cows to be kept on grass only during the trial, and for ten days previous to each period of trial. The time of trial from 10th to 20th of June, and from 10th to 20th of August.

First The age and breed of Cow, and time of calving.
Second The quantity of milk in weight, and also of butter made from such Cow, during each period of ten days.
Third A statement to be made to the Judges, of the facts, verified by the affidavit of competitor and one other person conversant therewith.

CLASS No. 2.

No. 11, HORSES AND MULES.

For best Stallion heavy draught	\$30	Second best do do	\$20
Second best do do do	20	Best Horse Colt between 2 & 4 years old,	20
Best Brood Mare for heavy draught,	20	Second best do do do	10
Second best do do do	10	Best Filley or Mare Colt between 2 and 4,	20
Best Stallion for quick draught,	20	Second best do do do	10
Second best do do do	10	Best Brood Mare for quick draught,	30
Best Brood Mare for quick draught,	30	Second best do do do	10
Second best do do do	10	Best Stallion for saddle,	30
Best Stallion for saddle,	30	Second best do do do	10
Second best do do do	10	Best Brood Mare for saddle,	30
Best Brood Mare for saddle,	30	Second best do do do	10

No. 12, MATCHED HORSES, GELDINGS, MARES, JACKS AND MULES.

For best pair carriage Horses,	\$20	Third best Single Mare,	\$5
Second best do do do	15	Best Jack,	20
Third best do do do	10	Second best do do do	10
Best Gelding,	10	Best pair of Mules	20
Second best,	5	Second best do do do	10
Third best,	5	Best team of Males not less than four,	20
Best single Mare,	10	Second best do do do	10
Second best do do do	5		

CLASS No. 3.

No. 13. SHEEP, SWINE AND POULTRY.

Sheep and Wool.

FINE WOOLED.

For best Buck,	\$10	Second best do do	\$5
Second best do do	6	Best pen of Lambs not less than 4,	10
Best pen of Ewes not less than 3,	10	Second best do do do	6

LONG WOOLED.

For best Buck,	\$10	Second best do do	\$6
Second best do do	6	Best pen of Lambs not less than 4,	10
Best pen of Ewes not less than 3,	10	Second best do do do	6

MIDDLE WOOLED.

For best Buck,	\$10	Second best do do	\$6
Second best, do	6	Best pen of Lambs not less than 4,	10
Best pen of Ewes not less than 3,	10	Second best,	6

NATIVE OR MIXED BLOOD.

For best Buck,	\$10	Second best do do	\$6
Second best, do	6	Best pen of Lambs not less than 4,	10
Best pen of Ewes not less than 3,	10	Second best do do	6

IMPORTED SHEEP.

For best Imported Buck,	\$15	Best Imported Ewe,	\$15
Second best, do	10	Second best do	10

FAT SHEEP.

For best Fat Sheep 2 years and upwards,	\$6	Best Fat Sheep under 2 years,	\$6
Second best do do	3	Second best do do	3
Third best do do	3	Third best do do	3

WOOL.

For best 3 fleeces of Saxony or Merino Wool,	\$5	Best 3 fleeces of Wool from Cross-breed Sheep,	\$5
Second best do do	3	Second and third do	3
Best 3 fleeces of Cotswold or Southdown Wool,	5	Best 3 fleeces of Lambs Wool,	5
Second best do do	3	Second and third do	3

No. 14, SWINE.

LARGE BREED.

For best Boar over 2 years old,	\$10	Second best do do	\$10
Second best do do	5	Second best do do	5
Best Boar 1 year old,	10	Best breeding Sow 1 year,	10
Second best do do	5	Second best do do	5
Best Boar 6 months and under 1 year,	10	Best lot of pigs not less than 5 under 6 months,	10
Second best do do	5	Second best do do	5

Including Chester, Berkshire, Hampshire, Leicester and their grades.

SMALL BREED.

For best Boar over 2 years,	\$10	Second best do do	\$10
Second best do do	5	Second best do do	5
Best Boar 1 year old,	10	Best Sow 6 months and under 1 year,	10
Second best do do	5	Second best do do	5
Best Boar 6 months and not one year,	10	Best lot of pigs, not less than 5 and under 6 months,	10
Second best do do	5	Second best do do	5

Including Neapolitan, Suffolk, improved China, Chinese, Mocha and their grades.

Best breeding Sow 2 years,	10	Second best do do	5
Second best do do	6	For best fattened Hog,	5
Best breeding Sow 1 year and un	6	Second best do do	3

No. 15, POULTRY.

Best lot of Shanghai fowls not less than 3—1 cock and 2 hens,	\$3	Best lot of Lantams not less than 3—1 cock and 2 hens,	\$3
Second best do do	2	Second best do do	2
Best lot of Dorking Fowls not less than 3—1 cock and 2 hens,	3	Best lot of Game Fowls not less than 3—1 cock and 2 hens,	3
Second best do do	2	Second best do do	2
Best lot of Poland Fowls not less than 3—1 cock and 2 hens,	3	Best lot of or native or Dunghill Fowls not less than 5,	3
Second best do do	2	Second best do do	2
Best lot of black Spanish not less than 3—1 cock and 2 hens,	3	Second best do do	2
Second best do do	2	Best lot of poultry owned by exhibitor,	10
Best lot of Jersey Blues, not less than 3—1 cock and 2 hens,	3	2 Largest collection of Fowls,	10
Second best do do	2	Less pair of Capons,	3
Best lot of Buck's County Fowls not less than 3—1 cock and 2 hens,	3	do do Turkeys,	3
Second best do do	2	do do Geese,	3
Best lot of Cochon China, Malay or Chittagong Fowls, not less than 3—1 cock and 2 hens,	3	do do Wild Geese,	3
Second best do do	2	do do Muscovy Ducks,	3
do do	3	do do Common Ducks,	3
do do	2	do do Pea Fowls,	5
do do	2	Best Caponed Turkey,	5
do do	3	Best lot of Guinea fowls, not less than 5,	3
do do	2	Best exhibition of Pigeons,	3

CLASS No. 4.

No. 17, PLOWING MATCH.

The Plowing Match will take place on Friday morning, at 9 o'clock. Persons competing in the Plowing Match, will have their teams hitched and in readiness at the appointed hour.

First Premium to be awarded to the best Plowman, 15 |

the best Plow, 10 |

Second best do do 8 |

Third best do do 5 |

Fourth best do do 3 |

Best single Horse Plow, 10 |

Second best do do 5 |

Best Sub-soil do do 10 |

Second best do do 5 |

Third best do do 8 |

Fourth best do do 3 |

First Premium to be awarded to the name of Plowman must be given, as well as the kind of Plow to be used, at the time of entry.

CLASS No. 5.

No. 17, FARM IMPLEMENTS No. 1.

Best Farm Wagon,	\$10	Best Corn Stalk cutter,	\$5
Second best do	5	Second best do	3

Best Hay Rigging,	5	Best Hay and Straw Cutter Di-	5
Second best do	3	ploma and	3
Best Harrow,	3	Second best do	3
Second best do	2	Best vegetable cutter,	5
Best Corn Cultivator—Diploma and	3	Second best do	3
Second best do	5	Best Corn and Cob crusher, by	10
Best Grain Drill—Diploma and	15	horse power,	10
Second best do	15	Second best do	5
Third best do	10	Best Clover huller	10
Best Seed Planter, for horse or	5	Second best do	5
hand power, for hills or drills,	5	Best Horse cart for farm	5
Diploma and	10	Second best do	5
Second best do	5	Best Ox Cart	5
Best Cultivator for general pur-	3	Second do	3
poses—Diploma and	3	Best Horse Rake	3
Second best do	10	Second best do	3
Best Broad Cast Sower—Diplo-	5	Best Ox Yoke	5
ma and	10	Second best do	3
Second best do	5	Best Corn Sheller, horse pow-	10
Best Roller for general use	5	er	10
Second best do	5	Second best do	5
Best Chod Crusher and Roller	5	3 Best Corn Sheller hand pow-	5
combined,	5	er,	5
Second best do	5	Second best do	3
Best Farming Mill—Diploma and	10	3 Best Farm or Road Scraper,	5
Second best do	5	Second best do	2

No. 18, FARM IMPLEMENTS No. 2.

For best Plow Gears,	\$3	Second best do	\$3
Second best do	2	Best single set Carriage harness	5
Best Wagon harness for farm,	3	Second best do	3
Second best do	2	Best Saddle and Harness for	5
Best Cart Gears,	3	general purposes,	5
Second best do	2	Second best do	3
Best double set Carriage harness	5		

No. 19, FARM IMPLEMENTS No. 3.

For best Churn,	\$3	Best six Axes,	\$3
Second best do	2	2 Best six Manure Forks,	3
Best Cheese Press,	3	Second best do	2
Second best do	2	3 Best six long handled shovels,	3
Best twelve Milk Pans,	3	Second best do	2
Second best do	2	2 Best six short handled shovels,	3
Best Milk Strainer,	2	Second best do	2
Second best do	1	1 Best six spades,	3
Best Potatoe Masher,	3	Second best do	2
Second best do	2	2 Best six Corn Hoes,	3
Best Grain Cradle,	3	Second best do	2
Second best do	1	1 Best set of Horse shoes,	3
Best Scythe—Snaith and Scythe	2	2 Best lot of Grain Measures, not	3
Second best do	1	less than six,	3
Best twelve hand Rakes,	3	Second best do	2
Second best do	2	2 Best dozen wire brooms,	2
Best six Hay Forks,	3	Second best do	1
Second best do	2	2 Best dozen Shaker or twine tied	3
Best six Grass scythes,	3	brooms,	2
Second best do	2	Second best do	1
Best six Grain scythes,	3	3 Best half dozen Corn baskets,	5
Second best do	2	Second best do	3

No. 20, FARM IMPLEMENTS AND MACHINERY No. 4.

For best Portable Saw Mill,	\$20	Best Weighing Machine for gen-	\$5
Best Steam Engine for farm pur-	20	eral farm purposes,	5
poses easily portable,	20	Best lot of small and large	5
Best Portable Grist Mill,	20	scales	5
Best Mowing or Reaping Ma-	20	Best Portable Cider Press—Di-	10
chine—Diploma and	10	ploma and	10
Second best do	5	Second best do	5
Best Sweep Horse Power,	10	Best half dozen Flour barrels	5
Second best do	5	5 Silver Medal	5
Best Railway horse power,	10	Second best do	5
Second best do	5	5 Best variety of Cooper work	5
Best Threshing Machine,	10	10 Silver Medal	5
Second best do	5	5 Second best do	5
Best Separator,	10	10 Best Shingle and Stave cutter	5
Second best do	5	5 Silver Medal	5
Best Portable Hay Press,	10	10 Second best do	5
Second best do	5	5 Linc	5
Best Churning Machine,	10	5 Best collection of Farmer's tools	5
Best dog power Churning Ma-	10	5 arranged in a deposit,	5
chine,	10	5 Best invention for securing the	5
Best Washing Machine,	10	run of water in ditches	5
Best Pump for wells,	10	5 Second best do	3
Second best do	5	Best and most numerous col-	10
Best arrangement for raising	10	lection of Agricultural Imple-	25
water other than pump,	10	ments Diploma and	25
Second best do	5	Second best	25
Best Hay and cattle weighing	10		
scales—Diploma and	10		

In addition to the foregoing premiums on Agricultural Implements Diplomas and Premiums will be awarded by the Judges on Discretionary Premiums for such new and meritorious implements and inventions as may be exhibited. Persons presenting Agricultural Implements or articles of mechanical ingenuity, are requested to furnish the Secretary with a particular description of the article, and the price and place where it can be obtained.

CLASS No. 6.

No. 21, DAIRY, SUGAR AND HONEY.

BUTTER.

Best lot (quality as well as quantity considered,) made from 5 cows in 30 consecutive days—20 pounds of the butter exhibited,	\$20
Second best do	10

A Certificate, signed by the owners of the Cows, and at least one

For best 5 acres of Corn, \$20 do acre of Irish Potatoes. 15

Best acre of Corn,	10	do ¼ acre do	10
do 5 acres of Wheat,	20	do acre of Carrots,	10
do acre do	10	do ¼ acre do	5
do 5 acres of Rye,	15	do ¼ acre Ruta Baga,	10
do acre do	8	do ¼ acre Sugar Beets,	10
do 5 acres of Barley,	15	do ¼ acre Mangel Wurtzel,	10
do 5 acres of Oats,	15	do ¼ acre Turnips,	10
do acre of Timothy Seed,	5	do ¼ acre Tobacco	5
do acre of Clover Seed,	5		

Competitors for premiums for the above agricultural productions, must produce a full statement of the mode of cultivation, and accompany the same with the certificate of two respectable men as to the product and Measurement of the ground, and also exhibit a sample of each crop at the Annual Meeting in Harrisburg, on the 3d Tuesday of January next, when these premiums will be awarded.

CLASS No. 10.

No. 28, FRUITS AND FLOWERS.

FRUIT.

Best and greatest number of choice varieties of Apples, 3 of each kind marked and labeled with the names.	\$10
2nd best do	5
Best dozen of Fall Apples,	5
2nd best do	3
Best and greatest number of choice varieties of Peaches 3 of each variety, with the name.	10
2nd best do	5
Best 6 varieties, named and labeled,	5
2nd best do	3
Best dozen of Quinces,	2
2nd best do	2
Best collection of Plums, 6 of each variety,	3
2nd best do	3
Best collection of grapes grown in the open air.	3
2nd best do	3
Best specimen of Water Melon,	2
2nd best do	2
Best collection of Water Melons,	3
2nd best do	3
Best specimen of Musk Melon,	2
2nd best do	2
Best collection of Musk Melons,	2
2nd best do	2
Best peck of Cranberries, domestic culture,	2
Best Home made Sparkling Wine,	3
2nd best do	3
Best home made Wine,	2
2nd best do	2
Best home made Bounce,	2
2nd best do	2
Best home made Cordial,	2
2nd best do	2
Best Bottled Cider, with mode of curing so as to keep sweet for one year.	2

The fruit exhibited not to be removed until the close of the Exhibition; and particular care is requested to be observed by the Judges and superintendents, that the same is not injured.

No. 29, FLOWERS.

Greatest variety of Dahlias,	\$3	2nd best do	\$2
2nd greatest do	2	Best collection of Greenhouse plants owned by one person,	3
Greatest variety of roses,	3	2nd best do	2
2nd greatest do	2	3 Best floral ornament,	2
Best variety of Phloxes,	2	2nd best do	2
2nd best do	2	3 Best hand Bouquet, Flat,	2
Greatest variety of Verbenas,	3	2nd best do	2
2nd greatest do	2	3 Best hand Bouquet, Round,	2
Best 10 varieties do	3	2nd best do	2
2nd best do	2	3 Best basket Bouquet,	2
Best collection German Asters,	2	2 For the most beautifully arranged Basket of Flowers,	2
2nd best do	2		
Best and greatest variety Pansies	3		

CLASS No. 11.

STOVES, SILVERWARE, GLASS AND GLASSWARE, CUTLERY AND BRITANNIA.

No. 30, STOVES.

Best Cooking Stove for coal—Silver Medal.	
2nd best do	\$5
Best Cooking stove for wood fire—Silver Medal.	
2nd best do	5
Best Cooking Range for families—Silver Medal.	
2nd best do	5
Best Furnace or other apparatus for warming houses, economy of construction and consumption of Fuel and security to premises to be taken into consideration—Silver Medal,	
Best ornamental Parlor Stove—Silver Medal.	
2nd best do	6
Best Hall Stove—Silver Medal,	
2nd best do	5
Best sample Hollow Ware—Silver Medal.	
2nd best do	6
Best sample Iron Railing—Silver Medal.	
2nd best do	6
Best sample Sculptured Marble.—Silver Medal.	

No. 31, SILVERWARE CUTLERY, AND BRITANNIA.

Best exhibition of Silver Ware—Silver Medal.	
Best exhibition of Table Cutlery, American Manufacture—Silver Medal.	
Best Pocket Cutlery American manufacture—Silver Medal,	\$5
2nd best do	

Best specimen of Silver ware with Agricultural design suitable for Premiums—Silver Medal.	
2nd best do	5
Best variety of Britannia Ware—Silver Medal.	
Best sample of Window Glass—Silver Medal.	
2nd best do	5
Best samples of Glassware—Silver Medal,	
2nd best do	5

CLASS No. 11.

BACON, HAMS, INVENTIONS AND DISCRETIONARY.
No. 32, BACON, HAMS.

For best 2 hams cured by exhibitor,	\$3
2nd do	5
3rd do	3
4th do	2

All competitors for these premiums are required to have their Hams cooked and brought to the Exhibition with the skins on, and also to give a statement of the manner of curing.

No. 33, INVENTIONS.

For best improvement for roofing houses, whether with wood, iron or other material—Silver Medal.	
Best lot of pressed brick,	\$3
Best lot of water or sand moulded brick,	3

For improvements in machinery useful to the farmer, and having valuable properties, and not included under any head of any regular premiums, discretionary premiums will be awarded; but no premium will be awarded upon articles which properly belong to any of the previous classes.

Under this general head, premiums will be awarded upon articles of ingenuity, usefulness and merit, which may be exhibited, which are not provided for in the foregoing list of premiums. Any articles deemed worthy, manufactured of iron, brass, leather, india rubber, and articles composed of cloth, fur hats, caps, umbrellas, &c., premiums may be awarded to.

No. 34, MISCELLANEOUS ARTICLES.

For best specimens of Daguerreotypes—Silver Medal.	
2nd best do	\$3
Best specimen of Cattle Drawing—Silver medal.	
Best specimen of animal painting in oil—Silver Medal.	
Best specimen of Dentistry—Silver Medal	
2nd do	5
Best specimens of Animal Lithography—Silver Medal.	

The making up of a Premium List, to embrace EVERYTHING to which premiums should be awarded by an Agricultural Society, is a task not expected to be perfected by any one whose experience in such matters is of no longer standing than his own; and knowing that this list is not complete, and that many deserving articles have not been included in the above, it is hoped that its incompleteness will not have the tendency to keep one article from the Fair because a premium has not been offered for it. The appointment of a Committee on Discretionary Premiums, with power to make such liberal awards as they may deem proper will make up this deficiency, and enable ALL who wish, to become exhibitors.

Farmers and others, who wish information relating to the coming Exhibition, will please address the Secretary at Pittsburg.

Pittsburg, June 1st, 1853.

ROBERT C. WALKER, SECRETARY.

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

COMPOSITIONS FOR TREATING WOOL—By Wm. S. Hubbell & Amos Barrett, of Kingsville, Ohio.—We claim treating wool with a composition of oil and alcohol, to prepare and fit it for the several manufacturing operations, for which oil has been and is now employed.

CULTIVATORS—By Philip H. Keck, of Morgantown, Va.—I claim first, the combination of the balancing pivot, with a cultivator, constructed, as described, for facilitating the turning of the same, as specified.

DITCHING MACHINE—By J. W. Morrill, of Hampton Falls, N. H.—I claim first the employment of the swinging cutters, in combination with the swinging spade, the whole being constructed, arranged and operated, as set forth.

Second, I also claim the combination of the swinging cutter, swinging spade, and lever, the whole being arranged in the manner specified.

SEEDING HUES—By J. A. Peace, of New York city; I claim the combination and arrangement of a double bladed hoe, with seed box and drop, as described for the purpose of planting separate kernels of corn at equal distances apart.

VOL. 3. WEST CHESTER, PA., AUGUST, 1853. NO. 5.

THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

THE FARM JOURNAL may be had at the following places:—

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Prize Essay on the Production of Butter,

READ BEFORE THE ROYAL AGRICULTURAL SOCIETY OF ENGLAND.

[Concluded from last number of the Farm Journal.]

The results are, for conciseness, shown in the following table:

No.	Date of Experiments.	No. of gall.	Mean temperature.	Time occupied in churning.	Quantity of butter obtained per gallon.	Weight of churned milk per gallon.
	1823.		°	h. m.	lb. ozs. dwts.	lb. ozs.
1	August 18	15	55	4 0	1 15 7.5	8 9
2	" 26	15	60	3 15	1 15 3.2	8 8
3	" 30	15	62	3 0	1 14 0	8 8
4	September 4	15	64	3 1	1 12 12.7	8 8
5	" 9	15	70	2 30	1 10 10.6	8 7

About the same period a similar set of experiments on churning cream was made by Mr. John Ballantine, of Edinburgh, from which it appeared that the greatest quantity of butter from a given quantity of cream is obtained at 60°; and the best quality at 55°

in the churn just before the butter comes. When the heat exceeded 65°, no washing could detach the milk from the butter without the aid of salt; but when a quantity of salt was wrought well into it, and the mass allowed to stand for 24 hours, subsequently being well washed with cold spring water, the serous portion of the milk was extracted.

No.	Date.	Scotch pint of cream.	Degree of heat in the cream.	Degree of heat when the butter comes.	Quantity of butter, 16 ozs. to the lb.	Time of Churning.	Weight of cream of 16 oz.	Heat of the air at 8 P. M.
	1825.	°	°	°	lb. ozs.			°
1	June 13	16 56	60	16 8	1 1/2	hours.	4 lbs. to pint.	56
2	" 20	16 32	58	16 0	2	hours.	ditto.	52
3	" 24	16 52	56	16 0	2	hours.	ditto.	52
4	July 12	16 65	67	15 8	30 min.		3 lbs. 14 ozs. do.	70
5	Oct. 20	16 50	53 1/2	15 12	3	hours.	4 lbs. 1 oz. do.	50
6	Aug. 20	16 53 1/2	57 1/2	16 5	1 1/4	hours.	4 lbs. do.	

No. 1 shows the greatest quantity of butter produced.

" 2 shows the best quality.

" 3 excellent.

" 4 soft, white, and milky.

" 5 injured by long churning.

" 6 excellent.

The same gentleman, after an experience of thirty years, came to the conclusion that butter is yielded in the largest quantity, and of the best quality, by the entire milk, kept in the first place until it has become perceptibly acid. The time required for this purpose varies according to the heat of the weather, the temperature of the dairy, &c.: this point being ordinarily ascertained by the formation of a strong, thick brat, or scum, showing itself on the surface, which then becomes uneven. When fit, the milk is put into a churn, as much hot water being added to it as will bring the whole to a temperature of 65°. It is then churned at the rate of thirty-eight to forty strokes per minute, until the butter comes, which usually requires from three to three and a half hours, when the velocity is diminished in order to gather the butter.

The following tables are given by Mr. Ballantine as showing the average results of many experiments in churning milk and cream:—

No. I. Entire Milk.

Season.	Temperature of the churn at setting.	Time in churning.	Heat of the churning house.	Heat of the churn when butter came.
June, 1842.	65°	3h. 30m.	60°	68°

No 2. *Cream only.*

Season.	Temperature of the churn at setting.	Time in churning.	Heat of the churning house.	Heat of the churn when butter came.
Oct. 1842.	55°	1h. 30m.	54°	59°

With one exception I have inserted, more or less, details of the various modes of making butter; the one to which I am about to allude is only, to the writer's knowledge, practised in the southern division of Lancashire, and the county of Chester, and very limitedly in Carlow. The practice alluded to consists in dividing the milk into two portions, viz., the greater part of the first milk is set in the ordinary way to stand for cream, the latter being usually taken off quite sweet, and the skimmed milk sold, used for the family, or given to the pigs, the latter part of the milking, which is rich in cream, is at once put in a vessel containing the cream of prior milkings; the last drawn are locally called "afterings;" in cold weather the mixed cream and afterings are set near the fire, in order to induce acescency, provincially termed "soiling." The churn should be set at 58° or 60°, and if smartly churned the butter will 'come,' sometimes within the hour, and rarely, if set at the above temperatures, will it exceed one hour and a half. In Lancashire, machinery is occasionally employed for churning, and was found advantageous so long ago as 1793. Mr. Thomas Wakefield, of Brook House, near Liverpool, employed a horse machine for this purpose, by which he effected, with a horse and boy to drive, in one hour and a quarter, what was usually the work of two men for five hours.

Quantity of new milk.	Quantity of butter by hand churning.
quarts.	lbs.
6,471	364
6,644	397
6,995	348
20,110	1,109
Quantity of new milk.	Quantity of butter by machinery.
quarts.	lbs.
7,261	469
7,675	482
8,120	574
23,056	1,525

The above quantities of milk were the produce of six successive fortnights.

If 20,110 quarts yield 1,109 lbs. of butter, how many pounds will 23,056 quarts yield? Answer—1271; thus showing 254 lbs. of butter additional produced by machinery. This favorable action of machinery is owing to the greater number of plunges made within a given time, particularly when inanimate power like a steam-engine is employed, in which case the exact number to every minute can be regulated to the greatest nicety; forty plunges a minute is found to be the most judicious rate. In large dairies in South Lancashire small steam engines for driving churns are by no means uncommon, the same power being also very serviceable for cutting chaff, roots, &c.

It has already been shown that milk is composed of casein, butter, sugar, water, and a small amount of inorganic salts; it has also been stated that the covering of the fatty globules of the milk is dissolved by acetic or lactic acid; seeing this, it is easy to conceive that cream or milk, a little acescent, will "give" the butter with less labour in churning than when the milk or cream is void of acidity. Milk,

like the juice of fruits, such as the grape, apple, pear, &c., contains the principal ingredients requisite for the vinous fermentation, viz: sugar and a protean compound—soluble albumen—the latter liable to enter into rapid changes when exposed to the influence of the oxygen of the atmosphere; by which means it becomes converted into a ferment, which has the property of slowly, in the first instance, converting the sugar of the milk into alcohol, which latter, by further oxidation, is converted into lactic acid, the lactic acid acting upon the coating of the fatty globules as previously noticed. This action invariably takes place during warm weather, the original fermentative action being somewhat similar to that of the mode of brewing beer at a low temperature, as practised in Bavaria. Dr. Lyon Playfair has, however, stated that in winter a different action takes place, namely, that during cold weather the temperature is not sufficiently elevated to cause vinous fermentation, and that the action of the oxygen in the first instance, at this season, is confined to the casein, in other words the putrefactive fermentation takes place. It is impossible, therefore, to make good butter from milk undergoing such a change as is here named, for when incipient putrefaction has once commenced, it cannot be arrested by ordinary means, and is consequently imparted to the minute quantity of casein remaining in the butter, and is never wholly extracted; such butter speedily becomes rancid, even in winter, notwithstanding the low temperature of that season is unfavorable to the promotion of putrefactive changes.

The reason why sweet cream requires less churning than cream and milk mixed, arises from the circumstances that in cream alone the absorption of oxygen, which takes place at every agitation, is diffused throughout a much smaller quantity of liquid, the lactic acid formed is consequently much more concentrated, and acts with greater energy on the outer coating of the butter globules, butter, therefore, comes more quickly. It must be observed that however sweet the cream may be, when placed in the churn, butter is never formed until after the formation of lactic acid. In making butter, sweet cream is a relative, rather than an absolute term, for in fact acescency commences within a few hours after the milk has been set to stand. In endeavoring to obtain butter from sweet milk alone, the labour required to form the butter is excessive, for in this instance the quantity of oxygen that can be absorbed through the influence of agitation is proportionally decreased in the ratio of the increased quantity of liquid throughout which the butter is diffused; whilst, at the same time, a larger amount of oxygen is required in order to convert a portion of the sugar of milk into alcohol, and ultimately into lactic acid. But in a closed churn a long time elapses before these changes take place; consequently, we need not be surprised to find that Dr. Traill and others failed to obtain butter from sweet milk alone; yet on one occasion the experiment was tried in Carlow, butter was obtained from new milk under the inspection of the writer, but it took upwards of five hours to produce it, and the butter was of inferior quality, having all the characteristics of over-churned butter. The reason why it is found requisite in practice to churn milk and cream mixed at a higher temperature than cream alone, arises from the fact that temperature has a marked influence in promoting chemical changes. Reasons have already been assigned why the lactic acid, formed in milk alone, must be in a much more diluted form than that which will be found in cream slightly acescent in order to compen-

sate for this, a higher temperature and longer time is required to produce the desired effect.

The preceding phenomena are in strict accordance with the character of the churn used in the various districts where the lacteal products of the cow are churned in different forms. Almost invariably, certainly over the most extended area, the common barrel churn is used in those districts where cream is churned alone. By the barrel churn a large quantity of butter may be made from cream, with a moderate degree of rapidity and at a comparatively slight expenditure of labour, particularly as cream, when put into the churn, is almost invariably in some degree acescent, generally enough so for the purpose of obtaining the butter without requiring to be further oxygenized. No practical benefit is obtained by using cream quite sweet, as the increased labour required in churning far more than counterbalances any slight advantage which butter so made may derive for the purpose of keeping. If proper care is taken in "making up" the butter formed from cream slightly acescent at the time of churning, it will maintain its freshness equal to that made from fresh cream; at the same time avoiding the risk of over-churning, which will always be much greater in churning fresh than sour cream.

For churning milk and cream the barrel churn is wholly inadequate, the upright churn, or one with revolving dashers, being requisite in order to sufficiently oxygenize the milk, for which purpose this form of churn is well adapted, as there always remain sufficient openings to admit the atmosphere; whereas barrel churns are hermetically sealed during the act of churning, the operation having to be stopped occasionally for the purpose of opening a vent-hole, which is occasionally done to allow the escape of the gas evolved during the "breaking" of the cream.

The American churn varies only from the ordinary square churn with revolving dashers, in the circumstance that, instead of the dashers being open, the back of the dasher is a flat piece, without any perforation, having raised edges and four transverse pieces, dividing it something similar to the shelves of a book-case. When the dasher is turned round, the nests formed as described, convey and force into the milk or cream a quantity of the atmosphere equivalent to the cubic contents of the hollow space, which will remain in the interstices alluded to, when their edges come in contact with the fluid; in order, therefore, to produce the greatest action, the fluid ought to be on a level with the edges of those interstices; this will occur when the latter are in a perfectly horizontal position. This form of churn is the best for churning sweet cream, and will undoubtedly produce the butter from milk and cream, in any form, in much less time than any churn that has yet been introduced; but for working large masses of fluid, the labour would be excessively heavy, and in large dairies, where milk and cream are churned together, steam or other power would be required; it also remains to be yet tested on a large working scale, whether the butter will prove as good as that churned by the ordinary methods. Mr. Robinson, of Lisburn, has for some time introduced a churn from France, which is very neat and simple, and well adapted to gather the butter, having a grating for the purpose, to which also heating or cooling appliances can easily be adapted as the season or case may require.

On reviewing the whole of the circumstances connected with procuring butter, the writer is induced

to give a preference to what may be termed the Lancashire method, which combines the best principles connected with the other methods. By setting aside the milk first drawn to stand for cream, the most aqueous and serous portion of the milk is got rid of, whilst by preserving the last drawn portions, and mixing it with the cream, it obtains the requisite fluidity; the acescent form in which the whole is placed in the churn is favorable to the speedy formation of the butter. Another circumstance, of no inconsiderable moment, especially in a densely populated district, such as the northern manufacturing counties, is the quality of the butter-milk thus made, which is far superior to that made from cream alone. Churning should be regulated by a thermometer, cold water being applied in summer, and warm water in winter, to obtain the proper temperature, particulars of which have already been given. When the butter is made from cream alone, early in the morning (about 4 o'clock) is the best period of the day for the purpose. When a change is heard in the sound of the churn, and an unequal resistance is felt against the dashers, the butter may be expected to form very shortly.

After the butter is taken from the churn it must be well squeezed or "worked" by the hand, and all the water that possibly can be, should be pressed out, it being for this purpose kneaded, washed, and rolled out several times with clean cold water, and the last time a little salt should be kneaded into the mass, which will have the effect of causing the greater part of the remaining caseous matter to exude when subsequently washed in cold water, salt appearing to have the property of dissolving casein, as it does the albumen of bones, in pickled meats; the whole secret of Dutch butter making consists in this circumstance. If intended for very long keeping, a small quantity of saltpetre, may be added, which will prevent, in a great measure, the tendency of any remaining caseous matter from entering into the putrefactive state—the cause of rancidity—the difference in quality between salt used in England and Holland having nothing to do with the superior keeping quality of the latter. If properly made, half an ounce of salt to one pound of butter is sufficient, if intended for keeping; and one-fourth of an ounce of salt to the pound, if intended for immediate use. The circumstances connected with the formation of butter from clouted or scalded cream have already been sufficiently detailed: for immediate use the quality is not equal to that formed by ordinary methods, and for keeping is wholly inadmissible; the superior weight obtained is attributable to the quantity of casein and coagulated albumen, mechanically mixed with the butter, which it is impossible to eradicate by any subsequent means. The recently published report of the "Agriculture of Somerset," by Mr. T. D. Acland, relates an experiment in which a loss appeared to exist in the weight formed in making butter from scalded cream as compared with the ordinary process; this experiment, however, is contrary to all others made with the same view.

It may be important occasionally to know that a little saltpetre dissolved in warm water, and mixed with the cream taken from milk with a turnipy flavor, entirely eradicates it in the course of churning.

A factitious color can be given to butter by the use of annatto, or the scrapings of the red part of carrots; but neither will give the appearance of fine grass butter. All such practices are to be deprecated; the latter described mode, however, is the preferable one, in case artificial colouring is considered desirable.

Philadelphia Butter.

By request of a subscriber, we insert the following article, by Dr. Emerson, of Philadelphia, giving his views on a matter of much interest to Pennsylvania farmers, viz: the cause of the now admitted superiority of the fresh butter of Philadelphia market.—They were published some years ago, but will be new to many of our readers.

Dr. E. is the Editor of that excellent and standard work, the Farmer's Encyclopedia. Amid the duties of an arduous profession, he has given considerable attention to the important interests of agriculture. To such men practical farmers are often greatly indebted.

The sweet scented vernal grass can be procured at the seed stores in Philadelphia, from 50 cents to \$1 per pound.

PHILADELPHIA, Oct. 31, 1849.

SIR:—I wish to invite your attention to a subject relating to pasturage and the products of the dairy. It has already been laid before the public, but this so partially and imperfectly, that it will still be found by most persons invested with novelty, and as I believe fraught with important bearings upon agricultural interests.

Philadelphia butter enjoys a widely extended reputation for its peculiarly high yet delicate flavor, well known to all who have had opportunities of tasting it. Good butter produced in this vicinity is always to be found in the Philadelphia market, but it is only during the Spring that it possesses in greatest perfection that delicious flavor to which I here particularly refer. This superior flavor, like that distinguishing the Epping and Cambridge butter of the London market, has been very naturally ascribed to something eaten by the cows producing it. But what this *something* is has been a subject for vague speculation, and never yet defined or specified so as to enable persons in other localities to avail themselves of it for the improvement of their own pastures and dairy products.

Extensive observations and many experiments made and continued through many years have convinced me that the proximate source of the high flavor of our Philadelphia May butter is the *sweet-scented vernal grass*, abounding in the old pastures, fields, and meadows of the adjacent counties. Some of the facts and reasons upon which I found this conclusion are the following:

1st. In the dairy region around Philadelphia the sweet-scented vernal grass, with its peculiar vanilla-like fragrance, constitutes the predominant Spring herbage on all the pasture fields and meadows left several years unploughed. The longer that pastures have been left unbroken, the greater the proportion of the vernal grass, and the higher the flavor of the butter produced from the cows fed upon them. Many of the meadows and pasture fields have remained ten, twenty, thirty, and more years unbroken by the plough. In such cases the sweet-scented vernal grass affords almost the exclusive Spring herbage.

2d. The high flavor continues in the butter during the development of this grass, and invariably declines with the maturing of the seeds, after which the stems become dry and hard, and the cattle push them aside in search of fresher and greener herbage.

3d. The sweet-scented vernal grass is shown by

chemical analysis to contain an aromatic essential oil, of which *benzoic acid*, or flowers of benzoïn, is the base.

This aromatic principle is abundant, and can be readily obtained by distillation, furnishing a delightful perfume and source of flavor. As the milk of all animals is so very susceptible of acquiring disagreeable tastes from substances eaten, such as garlic, turnips, &c., it is natural to infer that it may likewise be imbued with agreeable flavors, when the proper agents for such a purpose are presented in the food.

4th. That the *benzoic acid* is the principal agent in producing the peculiarly agreeable flavor of butter made from pastures abounding in the sweet-scented vernal grass, I have rendered probable, if not a demonstrated fact, by several experiments in which the flowers of benzoïn given to cows imparted to the butter made from them the characteristic flavor. In such cases 20 or 30 grains of the benzoïn were given twice a day, previously dissolved in hot water, which was stirred into some flour or meal, and then mingled with the customary mess. The cows receive not the slightest injury from this or even a much larger quantity of the benzoïn.

The sweet-scented vernal grass, called by botanists *anthoxanthum odoratum*, is a native of Europe, from whence, at an early period of our settlement, it has doubtless been introduced into the vicinity of Philadelphia, its seeds having probably been blended with those of other grasses. It has been long naturalized, and now disputes the right of soil with the common green grass, and never yields possession, but becomes more and more predominant until the sod is destroyed by the plough, after which it clings to the borders of the field, along the fences, and hedge-rows. When, after a rotation of grain crops, the ground is left undisturbed by tillage to be again covered with green-sward, the vernal grass re-appears, springing from the old seed left in the earth. Though seldom sown designedly in this part of the United States, it is often sown in England, where it constitutes a part of the growth of most permanent pastures, growing in nearly every kind of soil, but attaining its greatest perfection on the deep and moist, loving shady places, such as the skirts of woods. The sweet odor by which English hay is often distinguished is chiefly derived from an admixture of vernal grass. Although when alone it is not distinguished very highly as a hay grass, still its early growth and hardness, with the superior nutritive properties of its alternath, gave it high claims in the composition of all permanent pastures. In England it comes into flower about the middle of April, and in Southern Pennsylvania about the middle of May, the seed ripening in both countries about the second week in June. It is worthy of remark, that in the moist climate of England this grass continues throwing up flower-stalks till the end of autumn, while in Pennsylvania the efflorescence is confined to Spring. As the development of the aromatic qualities is mainly confined to the period of efflorescence, this fact may explain why the period of highest flavor in Philadelphia butter is so limited.

The question might be very naturally asked: If the sweet-scented vernal grass communicates to Spring butter the high and delicious flavor we have referred to, why is not this flavor imparted in winter, when cows are fed on hay cut from meadows known to contain this grass? The answer I would give is as follows: The principal and almost exclusive hay-grass of our section of country is timothy, which, with red clover frequently combined, matures and is mown long after the sweet-scented vernal grass has

dried its stalks and lost its distinguishing fragrance. Could the vernal grass be sown alone, or blended with other grasses maturing at the same time, and the hay all mown at the stage of perfect efflorescence and highest fragrance, there is little doubt that butter made from cows fed upon it would manifest more or less of the fine flavor at other times than in the Spring. I think it proper to remark that the milky products of cows fed on pastures where the sweet-scented vernal grass abounds, instead of always possessing a delightful flavor, are sometimes found imbued with a most disagreeable one, proceeding generally from weeds so often existing in pastures.

In southern Pennsylvania, garlic, and, especially that noxious and troublesome plant commonly called the "ox-eye-daisy," a species of wild camomile, (*Chrysanthemum leucanthemum*), are very often nipped by cows when the herbage is short or scarce. In such cases all the agreeable qualities that might otherwise have been derived from the vernal grass are not only neutralized, but overpowered by the disagreeable tastes imparted by the bad company with which it is associated. I consider the sweet-scented vernal grass worthy the attention of all farmers desirous of possessing the means of obtaining butter and other dairy products in the highest perfection, and of having in their fields and meadows one of the earliest, if not the very earliest pasture grass known.

But to these advantages, great as they are, may, I think, be added others of no small importance; one of which is the capacity to confer a fine flavor upon the meat of stock grazed upon a species of herbage fraught with a high aromatic principle. Such advantages have, from time immemorial, been the inheritance of people in certain localities, where they were originally indebted for them to chance, as for example with those residing in the vicinity of Philadelphia, few if any of whom are aware that there exists in their pastures any grasses not common to those of other places. To identify the immediate agent from which such advantages are derived, is to remove them from the uncertain control of accident, and place them at once at the disposal of all.

A description of the grass, the merits of which I have been describing to you, may be found in the *Farmers' Encyclopedia*, (Philadelphia edition for 1850), under the head of *Anthoxanthum Odoratum*, figured in plate 6, a.

Very respectfully, your obedient servant,

G. EMERSON.

HON. THOMAS EWBANK, Commissioner of Patents.

London Dairies.

We copy the following from Haxton's new English work, of "How to choose a milk cow," with a view to give our dairy farmers some idea of the profit of a milk dairy near London, the breed of cows most preferred, with the relative yield of milk, mode of feeding, expenses and profits. One sentence strikes us as rather curious, "The consumer is entitled to be served with the milk as it comes from the cow."

Is it possible the English Dairymen are not acquainted with the process by which a little water is accidentally left in the bottom of the pan, before the milk is poured in? If so, a fair exchange of this secret, to prevent headache from too rich milk, may go across the Atlantic, in exchange for the drop of

"burnt sugar" to make grass milk in Winter. Is not this interchange of *kind offices*, calculated as the politicians say, to promote a friendly feeling between the two countries.

"The Yorkshire cow is the great favorite with the London dairyman, as she answers all the purposes of his trade, being a good milker, and when accident or old age renders it necessary to discard her, she is soon ready for the shambles. In Mr. Biggs' dairy, 31 Edgeware Road, London, there are about 400 cows constantly kept; of these, the greater proportion is composed of the Yorkshire breed, of various degrees of affinity between the old Holderness and Durham breeds. There are also some of his cows which are longer in the horn than those already mentioned, and which are no doubt more allied to the original Holderness, or perhaps have long-horn blood in them: while there are others whose horns and general appearance indicate their close alliance with the improved short-horn or Durham breed. Of these, the most valuable is the cross between the Holderness and Durham, as being good, both for the pail and the butcher; on the other hand, the Holderness and long-horns give the richest milk, run soon dry, and are more difficult to fatten, while the pure short-horn gives least milk, but makes most beef in a given time. With these properties to choose amongst, it is not difficult to decide which of these breeds is most profitable to the London dairyman; whose trade is to sell as much milk as he can, and only to fatten his cows for the butcher when necessity compels him.

A Yorkshire cow in a London dairy establishment is seldom calculated to give less than 20 quarts of milk daily, for the first four months after dropping her calf, and many of this breed have been known to give from 30 to 40 quarts of milk daily, for a few weeks after calving. In Mr. Biggs' dairy 20 quarts a day is the average quantity of a great proportion of his best cows, and many of them would continue in milk all the year round; but as this would be injurious to the animals, and would diminish the yield in the succeeding year, they are intentionally run dry about six weeks before the time of calving.

The whole quantity of milk produced in twelve months, by one of these Yorkshire cows, when fed as in the London dairies, cannot be less than 4000 quarts or 1000 gallons. The retail price of new milk is 16d. per gallon, and when sold wholesale to the milkman, the price realised by the dairyman is not less than 1s. per gallon; so that from this data it appears that a cow, giving 1000 gallons per annum, produces 50l. worth of milk during that period. Of course the feeding is very liberal, and, from the high price of green food in the metropolis, is necessarily very expensive. The milking and feeding in Mr. Biggs' dairy is as follows:—

4 A. M., milked. A good milker can milk sixteen cows in two and a half hours.

4 A. M., one bushel basket of brewer's grains to every two cows.

6 A. M., three bushel baskets of Swedes or Mangold Wurtzel to every two cows.

5 A. M., one truss of hay to every twelve cows.

9 A. M., water; which is the only time they are allowed to drink during the twenty-four hours, in winter, and each cow drinks about twenty-four quarts. In summer, water is given twice.

11½ A. M., one bushel of grains to two cows.

1 P. M., milked again.

2 P. M., three bushels of roots to two cows.

3½ P. M., one truss of hay to every eight cows.

In summer the green food consists of Clover, Italian Rye-grass, or Vetches.

The cows are milked twice a day, which occupies about two and a half hours each time. The cow-houses are cleaned out five times every day, and the gutters kept sweet by allowing water to flow through them. The cows are thoroughly cleaned and combed once a week.

From the foregoing data, the following calculation of the annual expense of house-feeding a London dairy cow may be deduced:—

Winter food, from 1st October to 1st May, (212 days):—

212 bushels of grains, at 6d.,	£5 6 0
13½ tons of Swedes and Mangold, with the tops, at 20s.,	13 5 0
1 ton of hay, at 90s.,	4 10 0

Summer food, from 1st May to 1st October (153 days):—

11½ tons of Grass, Clover, or Vetches, at 20s.	11 10 0
153 bushels of grains (or an equivalent), at 6d.	3 16 6

Total expense of food,	£38 7 6
Interest on capital, 16½, at 5 per cent.	0 16 0
Hazardous insurance, or annual loss,	0 16 0
Attendance, milking, &c.,	1 5 0

Total expense,	£41 4 0
Produce per cow:	

1000 gallons of milk, at 1s.,	£50 0 0
Calf,	1 0 0
Manure,	4 0 0

	£55 0 0
Deduct expense,	41 4 6

Profit,	£13 15 6
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The daily expense is nearly 2s. 3d. per cow, and the daily yield of milk throughout the year nearly 2½ gallons; and no London dairyman will long keep a cow that does not give 2½ gallons a day. In the above calculation no charge has been made for rent of premises; but even although 1½ per cow be struck off for this item, the profit is still abundant.

In speaking thus highly of the Yorkshire, as in every way well adapted to the purposes of the metropolitan dairyman, it must be admitted that she is neither so good for a cheese or butter dairy as some of the smaller breeds. In the former case, quantity of milk is the desideratum, while in the two latter it is quality or richness. Were the Yorkshire cow employed either for the production of cheese or butter, the refuse—whey and butter milk, or skimmed milk—would be much greater than that yielded by milk of a richer quality; and, in consequence of this, the profits would be considerably diminished. In a milk dairy there is no refuse; and should the consumers in large towns complain of the inferior quality of milk sold to them, they should remember that they cannot enjoy the luxuries of the country and those of the town at one and the same time. The consumer is entitled to be served with the milk as it comes from the cow; but when he insists on having grass milk in the middle of Winter, he has no reason to complain should his impotency force the milk-seller to adopt the harmless device of counterfeiting an article to please his customer's eye, by the infusion of a drop of burnt sugar, to give the milk the rich yellow appearance which it usually possesses when the cows are fed on grass.—[Mr. Haxton, in "How to Choose a Good Milk Cow."

Rural Art and Taste.

We make the following extracts from an address on the above topics, before the Warren Lyceum, Warren county, Pa., by Patrick Falconer, Esq. Were the fine taste, and correct appreciation of the beautiful in nature and art, possessed by our friend Falconer, more prevalent throughout Pennsylvania, we should not see such indiscriminate destruction of our noble Forest Trees, in and around our towns and villages, such entire indifference in locating them, as well as private rural residences, without any reference to the splendid scenery, and natural advantages of situation, no where more abundant. We should then see more open spaces reserved for public Parks, more shade trees planted along our dusty streets and high-ways, more beautiful gardens, and grass plots in front of and around our houses. This would not only promote health, and comfort, and enjoyment, but by directing public taste to such things, have a good moral influence on the community, and even in a strictly utilitarian, or dollar and cents view, would be a good investment. If the public can only be convinced of this, we predict there will be quite a rage for planting trees. We have no doubt of the fact ourselves. Many a suburban village has been selected for a residence by strangers accidentally visiting it, who have been attracted by the good taste and embellishments of the private and public buildings, set back from the street, and adorned with ornamental trees and shrubbery. We know of country seats having been increased in value some thousands of dollars, simply by the judicious location of buildings, and the arrangements of a well furnished lawn and garden.

If there is no space in the town of Warren, reserved for a Public Park or Square, we shall depend on our friend Falconer, to have one under way by the time of our first visit. We published in the Farm Journal, of January last, an engraving of one we have in West Chester, with a list of trees and shrubs, already planted:

Could not a few public spirited individuals in many of our inland towns in Pennsylvania, organize a "tree planting association," not only to plant in a public square, secured and forever appropriated, to this purpose, but also in front of private dwellings, and along the whole line of streets. The expense would not be felt. Go into the woods, and make selections of some of the finest shaped Oaks, Maples, Magnolias, Beech, Elm, as well as Balsam Fir and White Pine, and other evergreen trees, and occupy one or two seasons in preparing them for being transplanted, by pruning into proper shape, and then digging around and under them, so as to cut off the main roots, and induce a growth of Fibres. In this way, by proper preparation, well shaped, and good sized trees could be removed, either in Winter with a frozen ball, or early in the Spring, and a surprising

effect produced, as if by magic. As an additional stimulus, Agricultural and Horticultural Societies in different counties, might offer premiums to individuals or to county towns, who shall plant the largest number, and greatest variety in any one season.

Extracts from an Address by P. Falconer, Esq., before the Warren County Lyceum.

In forming our plans we should get as near to nature as we can, artificially imitating her in ponds of water, spouting, sparkling or dripping fountain and rock work, and to them may be added the devices of vases, sun-dials, rustic chairs and arbors, and fail not let me urge, to have your lanes, streets or parks well diversified; and ever remembering the evergreen; it affords, especially in winter scenes, the bewitching charm of more favored portions of the year. And you find the arrangement in nature around you, whatever direction you chance to look. Yes, blended together in groups sufficient to gratify the taste of the erudite and fastidious. When the two great humorists of the two respective hemispheres met at Abbotsford, Scott said to Irving, "the greatest desire I have of seeing your country is to enjoy an uninterrupted full view of it in its primitive grandeur, and sublimity, with the idea of thousands of miles of untrodden forests around me."

This privilege you enjoy at the small expense of a short ride or walk, and yet rarely allow it a passing thought, or admit its expanding influences, or relish its enchanting pleasures, so much as many of the displays of man's fancy, which are lauded to the skies. The pines take your fancy because they are susceptible of making first-rate shingles, and first quality of boards. The beautiful maples and hickories, because they make excellent wood for fuel. The chestnut for their nuts, and because they make the best of rails and fence posts. And your admiration, shall I say it, here ends.

To those who have never planted a tree, if there are such here, let me entreat of you again to redeem the time, and to you that fell the forest, spare some kind memento from the fell destroyer, and listen and hear those

"Tongues in the trees—books in the running brooks,
Sermons in stones—and good in everything."

The other branch of the subject may be defined as villa or suburban gardening. And this is something almost all claim to be interested in.

Holding still to the unfailing designs and principles laid down in nature, we might sum up this division of our subject by calling it a miniature of the former; the delicate arrangements of which, in flowers and shrubs at least, are under the gentle care and nice discriminating faculties and perfections of the more gentle hands of the ladies. Well does it become them thus to lavish their graces and gratify their tastes. The flower beds may be so placed as to gratify the taste of the owner. We greatly prefer this to the stiff and studied copyright of some leading personages. We would greatly prefer more individuality, or originality about each place. There is too little of this in all other matters, or a number of them, at least, than ought to be. Some things might be laid down for the guidance of all, in reference to the proper display or effect. The large shrubs and flowering plants should always occupy the back ground near fences or other objects, which we may wish to hide from view. In the open ground they should occupy the centre of the group, the lesser the next, and the roses and moss may close up the appy clustered conical form. Then you will be

able to see the full effect or influence of all; the blending of the varied hues of the whole, having respect always to their season of full flower. The fountain according to the style best adapted to the supply of water—dripping in case of a small supply, and spouting and sparkling in more favorable supplies and localities.

Your hills teem with abundance of the element. The town might have a public font, in some central place, whose waters might, after making their displays, be converted at will when necessary to allay the consuming elements, besides affording a beautiful public resort, with a little attention to the decoration of the place, by a few flowers—many of the beautiful families of plants love to near its approach and show acknowledgements in their blushing faces.

There are two things we desire to see avoided—the mole hill system, and the stiff, straight, unnatural walks. The smooth level surface for the bed and sweeping curves in the walks, serpentine if you choose, are to be much preferred. To those who deprecate any thing whose merit they think is only for ornament, we would merely say, plant your yard or lane, if any you have, with the dwarf bearing fruit trees, and of those the dwarf pear is by no means to be depreciated; they are both rich and beautiful, especially when loaded with their rich fruits, and your sincerity will be respected. If you object to the fountain, let us only say the cranberry thrives well by its side and seeks its humid influences. To us, both these combined would be less exceptionable. Who does not feel well remunerated for any thing he propagates and rears, even if he could procure it for a less equivalent? There is a peculiar relish given to it, gratifying to the eye, and delicate to the taste—there is a filial affection springs up that knows no change.

Ape not too much after the foreign plants and flowers, as for the French fashions, but lay hold manfully of the productions of your own vallies and hills, and you cannot fail to be well supplied. We mean not to be understood as despising foreign things, but despising merely those tastes for them, simply for no other reason than their birth and origin, and not their merit.

"Is there no moral beauty
In the bosom of a rose?"

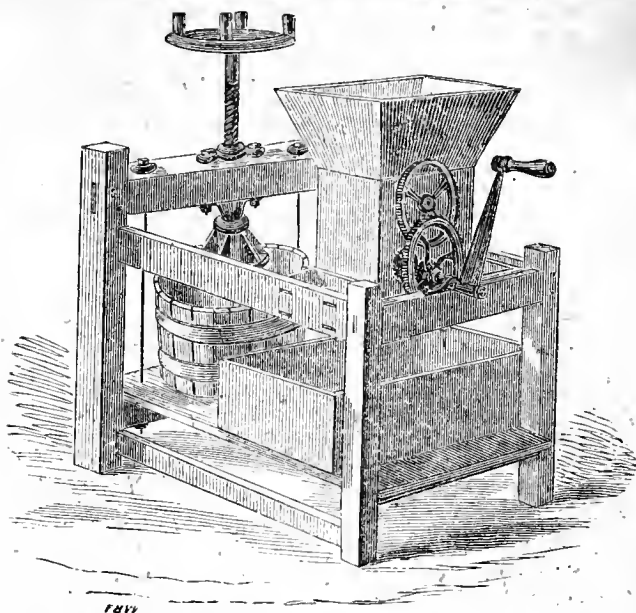
What has nature left unfinished in Warren? The picturesque beauty of its scenery and its grand panoramic hills, shown by moonlight—I fear many an eye now looking on it that has had this privilege for years, and some from earliest visions formed—would be disappointed were the artist to reduce it to the canvass and having enticed you to this house, or James' Hall by blazing bills to view an Italian scene, would go home without making the discovery that it was his own home.

Weeping Willows.

It is said that all the Weeping Willow trees in this country and England, originated from a twig set out by Pope the poet. He received a present of figs from Turkey, and observing a twig in the basket, he set it out in his garden, where it soon became a fine tree.

Bedford County Agricultural Society.

We observe by the Bedford Inquirer that, the second Agricultural Fair, in this flourishing county, will be held in the town of Bedford, on the 18th and 19th days of October next. The list for competition is extensive, and the premiums quite liberal.



Hickok's Improved Portable Cider Mill.

Under 1 existing Patent and 2 Pending Applications.

The accompanying figure represents a compact and effective machine, the whole being contained in one frame $2\frac{1}{2}$ by 3 feet, and 4 feet high; the whole weighs 300 pounds.

This machine, attended by 2 men, when properly worked, according to directions, is said to make 6 to 12 barrels of cider a day, and will grind alone by horse-power from 100 to 300 bushels of apples a day.

The peculiar arrangement of the cylinders is such that no description of apples will clog it up, but it will at all times work free and fast—qualities it is believed no other machine possesses.

Seed Farm of David Landreth.

We observe in the Germantown Telegraph, that the "Farmers Club" of that vicinity, have recently had their monthly meeting at "Bloomdale," the residence and Seed Farm of David Landreth, of Phil'a. The extent of ground devoted entirely to the raising of seeds, over 200 acres, as well as the care and accuracy observed in their growth and preservation have given this establishment a high and well deserved reputation. "Landreth's seeds" are known and esteemed everywhere. We observe he has this season 50 acres in Peas, which were about being harvested, to be succeeded by a crop of Beans, thus obtaining two crops from the same ground. An order of four tons of seeds was lately shipped for British India, and they are annually sent in large quantities to California, New Mexico, South America, and the West Indies. A pair of Norman Ponies, working within 16 inches, are used for cultivating the drilled crops. This establishment is the largest and most complete in the United States.

The press is provided with a heavy wrought iron screw, and the pressing tub or box is so arranged that as soon as the pressing is accomplished, it can be opened in an instant and the pomace taken out, and it closed as quickly and another charge put under the screw.

No straw or bag is used and the cider comes out fast and clear. Any boy of 14 years of age can press as readily as a man.

While it possesses all the advantages of the old style press, it has none of its faults. One quart or one barrel can be made any time it suits the owner to use it, and it can be worked by hand or horse power. Manufactured by W. O. Hickok, Harrisburg, Pa., and for sale, see advertisement.

Preserving Fruits in their own Juice.

As the season of fruits is now approaching, it may be interesting to our lady readers to be informed of a method by which the most delicate fruits can be preserved so as to retain their flavor for an almost indefinite period. Thirteen bottles of fruit so preserved, were exhibited lately at Rochester, New York, by William R. Smith of Wayne county, viz: five of cherries; two of peaches, one of strawberries, three of different varieties of currants, one of blackberries, and one of plums.

They were examined by a committee, and found of fine flavor; and the committee expressed the opinion that the art of preserving fruit in this manner is practicable, and that the fruit when carefully put up, can be made to keep as long as may be desirable.

The method of preserving is thus given to the New York State Society by Mr. Smith:

They are preserved by placing the bottles, filled with the fruit, in cold water, and raising the temperature to the boiling point as quickly as possible; then cork and seal the bottles immediately. Some varieties of fruit will not fill the bottle with their own juice—these must be filled with boiling water and corked as before mentioned, after the surrounding water boils.—[Southern Cultivator.

Guenon's System of Choosing Milch Cows.

A new work has lately been issued in England, containing an account of their various breeds of cows, "with a description of the marks by which their milking qualities may be ascertained, together with their management and productive results," by J. H. Magne, Professor of the Veterinary School, and John Haxton.

We are much pleased to find it fully sustains the theory of Guenon, and corroborates the *experience* of our Pennsylvania farmers, particularly in the eastern section of the State. Although a notice of Guenon's book was published with his cuts, some two years ago, in a few of our agricultural exchanges, the *system* was first recommended and *urged* upon the notice of farmers through the columns of the Pennsylvania Farm Journal. Here it was first experimented upon and fully tested, as will be seen on referring to many articles and communications in our pages, within the last few months. We see it is still doubted and ridiculed in some of our eastern journals, but experience is proving it to be one of the most valuable discoveries of the day.

The book above referred to states, "that in a London dairy of four hundred cows, and where nine-tenths are far above average milkers, the upward growth of the hair on the posterior part of the udder, thighs, and perinæum, was too remarkable to be accounted for by accidental causes." In Mr. Leonard's stock of forty dairy cows on his farm of Water End, Gloucestershire, probably the finest pack in the country, the uniform development of the upward growth of hair, on the udder and perinæum is very remarkable on all the best cows. Two cows very much like each other, of the same age, and both bred from the same bull, were pointed out as having something peculiar in their relative powers of milking. Upon examination one of them was found to have a very superior scutecheon, while that of the other was as much inferior. The former was a first-rate milker, while the other was one of the worst in the whole pack!

We recommend our farmers who have not purchased Guenon, to procure one without delay.

Cascade Barn.

We give in another page an engraving, with plan and description of this barn, the judicious arrangements of which, both general and minute, are well worthy of attention. It displays great ingenuity, and a thorough understanding of every thing wanted, as regards comfort, convenience, and economical management. Such buildings and fixtures, could only be wanted, and could only be used, where the design was to carry on an *improved system* of farming, embracing all that modern science and practice combined have proved worthy of adoption. While the design reflects great credit on Professor Wilkinson,

the liberal expenditure required is no less so to the intelligence and enterprise of the proprietor, David Leavitt, Esq. We should like to visit this barn, when completed, and also to see the *farm and farm management* thoroughly carried out in accordance with it.

Those of our friends about erecting Farm Buildings, will do well to consult Professor Wilkinson, as he has had much experience, and is prepared to furnish plans adapted for every variety of situation and modes of farming.

Fat Animals at Exhibitions.

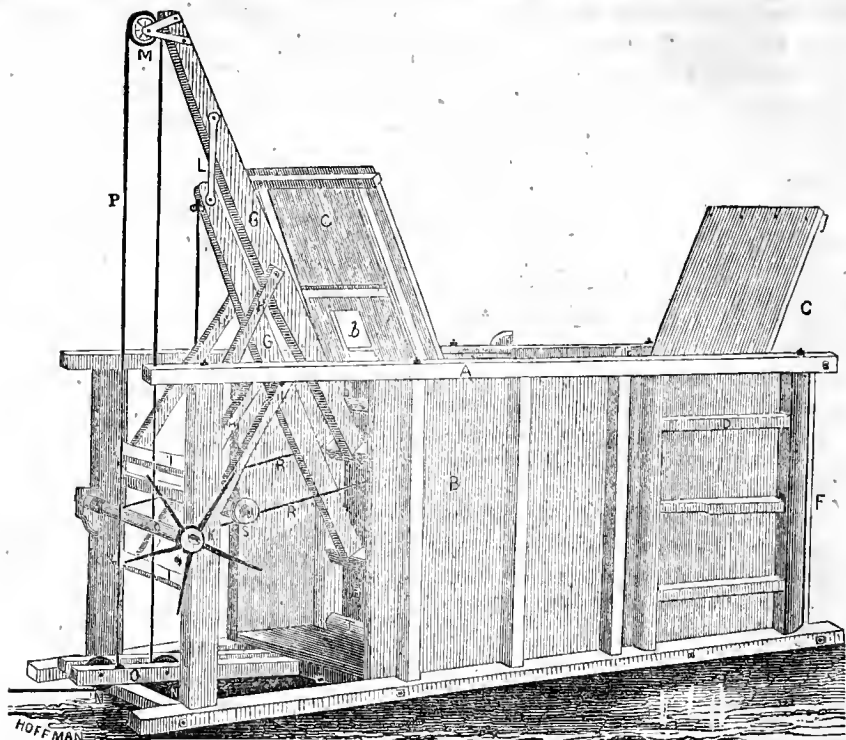
It has long been one of the great evils of our Agricultural Exhibitions, and indeed often a positive loss to the owner, as well as the whole country, that an animal to obtain a premium, must be subjected for some weeks or even months, to extra feeding, a kind of forcing process, to make as much fat as possible, and without which, his chance in competition would be slim indeed. All *points*, whether good or bad, must be covered over with fat, all rough places filled up, so as to make a round, barrel shaped form, the consequence of which often is the animal is ruined, and never recovers his natural condition. This excessive fatness is a state of disease, which often destroys the procreative powers, and renders him or her worthless for breeding purposes. This is well known to farmers. The practice is altogether wrong, and should be discountenanced by committees at exhibitions, and in the regulations of our agricultural societies. Let it be generally understood, that no animal, whether of neat cattle, horses, swine, sheep, or even poultry, which bear evidence of having been pampered up for a special purpose, and thus *injured* for breeding, can, except when intended for slaughter, be entitled to a premium. If committees are *judges* as they *ought* to be, they could decide if the *disposition* to fatten, (which is all that is wanted,) exists, without this very unnatural and injurious forcing process. The present system is a great evil, and should be remedied. The selection of experienced men as judges of stock, who can *recognize* a good form, in any condition of the animal, is perhaps the true remedy.

Montour County Agricultural Society.

The Exhibition of the Mountour County Agricultural Society, will take place on Friday and Saturday, the 21st and 22d days of October next, in the borough of Danville.

The farmers of all parts of the county should endeavor to be well represented at this Exhibition. Make preparation in time.

Never consider anything a trouble that has in it the remotest likelihood of success.



Patent Hay Press.

We give above an engraving of Dederick's patent Parallel, Lever and Horizontal Hay Press. To it was awarded the silver medal for the best Hay Press, at the last exhibition of the New York Agricultural Society, held at Utica. It is said to possess many advantages over the Vertical or upright Press, among which are:

1. It does not require to be taken apart or let down or loaded on a wagon to be moved; but may be drawn anywhere about a farm, directly upon its own shoes secured underneath.

2. To fill the box requires neither platform nor upper floor. This labor, together with securing and removing the bale when pressed, is all done conveniently upon the ground.

3. The upper doors opening the entire length of the press, renders the filling and packing of the box convenient and comparatively easy.

4. It is so constructed that by withdrawing 12 bolts it can be taken apart, when desired; and the heaviest part carried by two men—a great convenience for storing, &c.

5. The doors open easily. The door handle may be raised with one hand. There is no occasion for using a hammer or maul.

6. By the peculiar arrangement of the parallel levers an almost entire removal of friction from the follower; so that, requiring neither legs nor guides, it moves forward on a roller attached underneath, in a

perfectly straight and upright position, without losing any power by tilting, binding, &c.

Price No. 1, 400 lbs. to the bale, \$150. No. 2, 300 lbs. to the bale, \$135. No. 3, 250 lbs. to the bale, \$125. Paschall Morris & Co., 380 Market Street, Philadelphia, are agents for the sale of this machine, to whom letters post-paid, for farther information may be addressed.

A good Hay Press is one of the very valuable implements for the farmer, which is being much enquired for, in sections convenient to means of transportation. The rapidly increasing consumption of hay in our large cities, and the high rents of buildings adapted for storing away any large quantity in bulk, are making these machines almost a matter of necessity. Bales of moderate size are being kept at various warehouses and points in Philadelphia, convenient for use by dray and cart horses, where owners can feed it to them, when in a small compass, during the day in the intervals of labor, thus saving the expense of stabling. The consumption in this way and by omnibus horses, to say nothing of private establishments is immense. We know that many farmers are unused to selling hay, and consider it ruinous to their farms. The same rule however, applies to this as to other crops. If every thing is sold off and nothing returned, of course impoverishment results. If part of the hay crop is sold, its place must be supplied with sown corn fodder, and the use of guano and other fertilizers, plaster, lime, &c. The compost

heap must be well attended to. The refuse materials for the barn yard must be collected and economised. Under a proper *system*, the sale of hay will not exhaust the soil so much as the sale of grain. On returning last fall from the State Fair in company with some farmers, we found at various points along the line of the railroad between Philadelphia and Lancaster, hay was worth only \$8 or \$10 per ton, while it was readily bringing in the city \$22 to \$25. There are many places in the State, convenient to public improvements where a portion of the hay crop might be spared to good profit; and to such we introduce the above Press. Sown corn fodder will yield in weight as well as nutriment, far more to the acre than grass, and it will have to enter into our rotation crops, and form part of our system of farm management, in certain parts of Pennsylvania to a much greater extent than heretofore.

Seckle Pear on Apple Stocks.

Some of the delegates, last fall, to the American Pomological Convention at Cincinnati, from the Atlantic States, report having heard in Ohio of considerable success, and on a pretty large scale, of working the *Seckle Pear on Apple stocks*. Will the editor of the Western Horticultural Review please inform us about this? The Seckle is proverbially a slow grower in the nursery; and one of the varieties, too, not destined to go out of fashion. The demand for good sized trees has always exceeded the supply. If it is an exception to the general rule against working pears on apple stocks, and has been found to grow *with* the apple, and make a *permanent* tree, it is a valuable discovery, and we should be glad to hear more about it.

Women's Rights.

For the Farm Journal.

MR. EDITOR:—

Since the removal of the Journal to West Chester, I think your female subscribers have reason to complain that you do not dish up something for their entertainment. You give us no poetry, no sentiment, and hardly a receipt for cakes, puddings, pastry or preserves.

I have pored over the articles about lime, analysis of soils, raising root crops, and feeding them to the cows and pigs, and long for something more lively in addition to the other.

I fear you do not believe in Women's rights, and that this is an age of progress. I do not wish to support a paper that don't keep up with the times. We have rights, and we intend to maintain them, even if we have to walk right up to the cannon's mouth.

Yours respectfully;

JULIA D.

Westmoreland county, Pa.

On receiving the above, particularly in reading the last sentence, although having tolerably strong nerves,

we confess they were entirely unstrung. We immediately procured a Cook Book, and insert some receipts, and also a piece of poetry, which we hope will be satisfactory to our fair correspondent, for this month, if coupled with a promise to be more attentive to her sex hereafter. The spirit she displays carries us back to the days of the revolution. The husband, or sons, of such a woman, who would hesitate a single instant, about buckling on armor for the contest, would deserve to be pitied. They would be between two fires.

In respect to the insinuation, that we are opposed to women's rights, we must plead innocent to that charge. We have always been a strong advocate for women's rights, and long before there was such an excitement on the subject. We think they have an indisputable right to attend to the domestic affairs of the household, to teach the children, and either make or superintend the making of good wholesome bread, pies and cakes, darning the stockings, and a thousand other things, that the active out of door business of their husbands and brothers prevent them from attending to.

We hope no one will attempt to rob them of their rights, and certainly shall not ourselves.

For the Farm Journal.

Agricultural Review, No. 5.

Hay, from artificial grasses, fourth, fifth and sixth in rotation is the *most essential* crop, and basis of increasing fertility, upon the state of its product will much depend the thriftiness of both working and feeding stock. It is almost all consumed by these in the township. The yield, both quantity and quality, is greatly influenced by the manner of seeding the grasses; this is universally done upon the wheat, and two ploughings for this is becoming more customary, (as well as larger quantities of grass seed) from the increased advantage to the succeeding hay crops. Timothy, *phleum pratense* is sown at the time of wheat seeding, four to six quarts per acre, and covered by the last harrowing or by rolling. Clover is sown four to six quarts, as soon as the frost is out in the Spring. The first year after wheat, clover will greatly predominate, this by many is not considered as valuable as timothy, hence the practice adopted by some of pasturing one year previous to mowing. Others value it for *home use* quite as highly as timothy, though it will not bear handling and carriage to market as well, were this the object; in fact its value is mainly dependant upon time of cutting and method of curing. The writer's practice is to cut in full bloom, if the weather is fair, cut one forenoon, let it lay in swath until the dew is entirely off the next day, then spread it out evenly; the latter part of the afternoon horse rake it into windrow, if pretty dry heap it loosely, if not let it lay until the dew is off next day, then turn or heap, and haul in the after-

noon; if rain threatens to intervene, place in large well shaped cocks. But no *fixed* rule can be found for curing hay, the plan must vary with the yield, state of weather, temperature of the air, ground, &c. The second crop is frequently cut for seed, this is done with the cradle throwing two swathes together, about the 1st of 9th month, is exposed to the weather about two weeks. When well dried, housed: and either thrashed by clover machines attached to horse powers, or the heads separated from the stems by flail, and taken to clover mills. Yield about three bushels per acre—average price \$5 50.

Saving clover seed is exhausting and injurious, as many of the plants die, after maturing seed, which otherwise would have retained vitality another season.

The second year, fifth in rotation, there will be about an equal admixture of both grasses, the hay from this is mostly preferred.

The third year, or sixth in rotation; timothy will gain the ascendancy, this is considered most nutritious to be cut when beginning to seed, it is usually spread directly after the scythe, raked in winrow towards evening, heaped and hauled in the next day. As a market hay it commands the highest price, and is more highly esteemed by farmers generally than clover; sufficient of the best grass is reserved for seed for home use, by all, and occasionally whole fields are taken for seed; cut with the cradle from two to three weeks later than the hay, or when the *riper* heads shell freely to the touch; bind in *small* sheaves, and leave them exposed to the weather in open shock, about two weeks, then thrash by flail, yield from two to four bushels per acre—average price \$3. If the season is dry, timothy affords little aftermath. clover withstands the effects of the drouth much better.

Watered meadow banks, which were in vogue and highly prized 50 to 100 years ago, have mostly been abandoned, owing to the great care and attention necessary to be devoted to them, though there is no doubt the product is greatly increased by irrigation.

The average yield of hay per acre, is about 1½ tons, though as high as 3 may be cut sometimes. Average value of timothy at the barn, \$12; of clover, \$8 to \$10.

Horse forks for unloading, have been put into operation the past season, and are a great saving of manual labor.

All loose stones are picked and hauled off mowing grounds early in the Spring, then they are rolled and plaster is generally sown at the rate of 1½ bushels per acre.

Cost of raising per acre:

Second ploughing for wheat, on account of grasses, three-fourths of a day, - - - \$1 50
Extra harrowing, ditto, - - - 25
One-third of eight quarts of seed, and sowing, 50

Picking stone,	- - - - -	50
Rolling,	- - - - -	15
One and half bushels plaster and sowing,	- - - - -	50
Harvesting,	- - - - -	2 50
One-fifth of twenty-five loads manure, a \$1,	- - - - -	5 00
Ditto of fifty bushels lime, a 15 cents,	- - - - -	1 50
Fencing,	- - - - -	1 00
Taxes,	- - - - -	50
Interest on \$85,	- - - - -	5 10

Expense,	- - - - -	\$19 00
First crop, one and one-half tons, a \$12,	- - - - -	\$18 00
Second crop, value one-third,	- - - - -	6 00

Product,	- - - - -	\$24 00
Expense,	- - - - -	19 00

Profit per acre,	- - - - -	\$5 00
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C. B.

Birmingham, Seventh month, 1853.

For the Farm Journal.

Foot Rot in Sheep.

MESSRS EDITORS:—

Can you inform me of any sure remedy for disease in the feet of sheep, I believe sometimes called rot. It commenced in the first place with lameness in one or two, at first slight, but has increased so rapidly that some of them actually feed down on their knees, and I fear it is going through the whole flock. The foot, on examining, is quite hot, the hoof soft, with a fetid excretion, particularly between the cleft. It impairs their condition very much. If you know of any cure, please inform through the Farm Journal, for the benefit of your subscribers, and perhaps many others.

H. S.

Huntingdon county, Pa.

The disease alluded to above by our correspondent, is familiarly known by the name of foot rot, or hoof ail, similar perhaps, to what is called foul claw in cattle, although we have not observed the latter so contagious in its character. The foot rot in sheep, is one of the most painful and troublesome diseases they are subject to. The fore feet are generally attacked. H. S. may be assured it will spread through his whole flock, if not speedily arrested. We happen to have had some experience with it, and will state what we found entirely effectual.

A single sheep lame with the disease, purchased out of a drove, will communicate it in a short time to a whole flock previously free. The proximate cause is often low, soft and marshy pastures, producing sponginess and unsoundness of the hoof.

The first step should be to remove the sheep to high and dry pasture, separate at once, and keep the diseased sheep entirely apart from the others, both day and night. They should not even be in adjoining fields. Examine the hoofs carefully, and pare

away all diseased portions, with a sharp knife. Probe it into any loose or discolored places, to the sound parts, even though it should bleed. This paring and scraping must be thoroughly done. Where the disease has progressed far, maggots will often be found. The foot being entirely cleaned and scraped, chloride (Butyr) of antimony should be applied, as a caustic, and repeated after daily examination, so long as there is any unhealthy appearance. The sheep should also be housed at night, on ground covered with lime, (the fresher the better,) which should be cleaned off every morning, and the lime frequently renewed. In very bad cases the foot should be kept tied up. In rainy weather they should be kept under shelter, as wet greatly promotes the progress of the rot. We imported a lot of sheep one season, which from improper treatment on board ship, were badly affected with the rot, but by perseverance in the above plan, were finally cured. Sometimes paring the foot closely, and applying hot lime alone, will be sufficient, in the early stages.

For the Farm Journal.

Guano, Super Phosphate of Lime and Chappell's Fertilizer, for Wheat.

J. LACEY DARLINGTON, Esq.

Dear Sir:—Last fall I cut two acres of corn off to seed down wheat. Part of the land was a mellow loam, and part of it stony—the stone a gray sand stone. I measured it off into three pieces—two pieces half an acre each, the other one acre, in the middle, and drilled in the wheat with one of Moore's patent grain drills, the first week of October. On one half an acre I sowed 150 pounds Peruvian Guano before plowing; on the other I sowed 160 pounds of Super Phosphate of Lime one week after the wheat came up; and on the one acre piece, 600 pounds of Chappell's fertilizer before drilling the wheat in. The Guano cost \$4 50 cents, besides preparing it for use. The Super Phosphate \$4 80 cents, and the Fertilizer \$8 60 cents. There was no manure of any other kind put on either piece. For want of barn room I did not cut, and put each lot separate; I cannot therefore state the yield as accurately as I would like. Last fall I could see very little difference in either piece, but in the Spring the Guanoed piece had a darker green appearance, and was thicker on the ground than either of the other pieces. When the wheat came out in head the Guano piece was about four inches taller than the others, and those who helped cut it with myself say there is about one-third more to the ground, than on either of the others; the wheat better filled, and a better yield of straw.

Last fall a year I plowed in 160 pounds Guano on three-fourths of an acre of corn stalk ground, where I had corn two years in succession, the ground inclined to clay, and where the corn was the smallest

in the field. On a half acre, rather better land, I plowed in six large ox cart loads of horse stable manure, kept under cover; the land was also manured in the Spring for the second crop of corn. Between these two pieces I could see no difference in the wheat when cut, except that the manured was ripper two or three days sooner, owing, I suppose, to the land being higher. The guano in both cases showed itself to the drill marks.

My conclusion is that Guano is cheaper than manure for wheat, as it costs less per acre. We have to pay \$1 50 for an ox cart load of manure in West Chester, and haul it three miles, which is worth half a dollar more. When I haul wood to West Chester, I haul manure as a back load, or I could not haul it for that price. I would prefer good barn-yard manure to either of the other three if I could make enough on the farm for each field. But the farm being out of order when I purchased, I can't make enough as yet, using, as I do, part of it for potatoes in the Spring. I put some Patagonian Guano and Super Phosphate of Lime, in the furrow for potatoes, along side of manure this Spring, and when dug I may give you the results of the experiments.

If you think this worth a place in your valuable Journal, your are at liberty to publish it.

The kind of wheat raised was the Mediterranean, drilled one bushel and three pecks per acre.

J. F. I.

Westtown, Chester county, Pa.

For the Farm Journal.

Trees for a Lawn.

MESSES. EDITORS:

Having completed my dwelling house, 40 by 35 feet, 3 stories high, of stone, as well as grading and leveling of the grounds adjacent, I am now prepared for planting the coming fall, and wish for your opinion and advice as to a good selection of evergreen and deciduous trees and shrubbery, of which I am entirely ignorant. By my estimate of over two acres there is room for 150 trees and 50 shrubs, not one of which is now growing. The site of the buildings was selected for its elevation and commanding view. I want as much variety as is consistent with good taste, and where practicable, especially with the shrubbery, a succession of bloom, from spring till fall, and such trees as are not especially liable to insects. Can you assist me?

Very truly, your subscriber,

J. H., Philadelphia county.

In reply to our correspondent, we will give a list of such as we should plant ourselves, and could do it rather better if we knew of the exact situation of the ground, whether much of a slope or not, and also of the surrounding objects, whether any unpleasant sights near or distant, are to be obscured, or any agreeable views to be opened. This, however, must

be left to his own taste and judgment. All the trees named are hardy here.

EVERGREEN TREES.

- 6 Norway Spruce,
- 3 European Silver Fir,
- 2 Double White Spruce,
- 2 Balm of Gilead,
- 2 Austrian Pines,
- 4 Decdar Cedar,
- 2 Scotch Pines,
- 3 White Pines,
- 2 Japan Cryptomeria,
- 2 Cedar of Lebanon,
- 2 Himalayan Spruce,
- 2 Arancaria Hibricata,
- 3 Hemlock Spruce,
- 4 American Arbor Vitæ,
- 2 Pilate Leaved do,
- 4 American Juniper,
- 2 Irish do,
- 2 Chinese do,
- 2 Juniper Excelsa,
- 4 English Yew,
- 4 Irish do,
- 2 Pyramidal do,
- 4 Enonymous, Green and Variegated,
- 2 American Holly,
- 4 Tree Box,
- 3 Rhododendron Maximowicz,
- 2 do Catawbiense,

75

DECIDUOUS TREES.

- 6 Sugar Maple,
- 4 Norway Maple,
- 6 European Sycamore,
- 2 Horse Chestnut,
- 4 Red Maple,
- 1 Double Flowering Horse Chestnut
- 2 American Linden,
- 2 Birch,
- 2 Judas Tree,
- 2 American Fringe,
- 2 Mist Bush, Rhus Cotinus,
- 4 Double Flowering Apple,
- 1 do do Cherry,
- 2 English Laburnum,
- 2 Purple Beech,
- 1 Flowering Ash,
- 1 Weeping Ash,
- 1 Golden Barked Ash,
- 1 Variegated Leaved Ash,
- 1 Willow leaved Ash,
- 1 Halesia,
- 3 European Larch,
- 1 American do
- 2 Tulip Poplar,
- 1 Magnolia Acuminata,
- 2 do Conspicua,
- 2 do Glauca,
- 1 Mountain Ash,
- 6 Oaks,
- 1 Jinko Tree,
- 3 Weeping Willow,
- 2 Salix Pentandria,
- 1 Deciduous Cypress,
- 2 American Elm,

75

SHRUBBERY.

- 1 Yellow Virgilia,
- 1 Rhamnus Carolinianus,
- 2 Double Flowering Thorn,
- 1 Oak leaved Hydrangia,
- Altheas Double Flowering,
- do Variegated Leaved,
- Dwarf Horse Chestnut,
- Viburnum Opulus,

And the balance of smaller flowering shrubs, such as Spiræas, Wiegelia, Flowering Currants, Japan Pear, Deutzia, Scabra, Forsythia, Lilacs, Peonies, Honey-suckles, &c. All of the above we should most certainly have, and there will still be space for perpetual roses, and many other little matters, to be found at most of the nurseries.

For the Farm Journal.

Chicory.

Cichorium intybus. This is a plant which produces a very early and prolific fodder. There is no plant that will stand drouth better than this. It is also very useful as a pasture or to cut and give to cattle in the stall, or soil them with it. The chicory is most excellent for Cows, Oxen or Hogs. No plant cultivated for fodder will bring an equal return with Chicory. It answers well to sow the Chicory with red clover, half of the one and half of the other; as it does well on either strong or light soil, if they have some bottom.

It may be sown in the Spring or Midsummer, and even in September, either by itself or with Oats, Barley, &c., at the rate of 12 lbs. per acre. It lasts 3 or 4 years in the ground; the roots of which Chicory

coffee is made, used as coffee or mixed with it, and which it improves greatly, both in flavor and effect, being greatly diuretic and neutralizing the heating effects of the coffee. To such a degree have its wholesome properties extended the use of it, that the consumption has become general in most countries, even in those where Coffee is imported, duty free. It is even getting imported largely for some years past in New York and probably in Philadelphia also. The roots remain in the ground all winter, without being affected by the severest frosts; any one desirous to make a trial with from half to one acre or more, can obtain the seeds either at D. Landreth's, 65 Chestnut street, C. B. Rogers, 29 Market street, or Paschall Morris & Co., 380 Market street, Philadelphia, and the necessary information on application, post-paid, with remittance, or to me direct.

F. A. NAUTS,

For the Farm Journal.

Imported Stock.

To censure or find fault adds us no friends, but makes us enemies of those whose delusions we have to combat. It is a disagreeable task. I reluctantly undertake it for the good of the farming interest.

In reading the account of the cattle sale of Mr. Sherwood, brings my assertion, I made in the December Number of 1852, and the March Number of 1853, in the Farm Journal to my recollection. None have refuted my assertion, we are left in the dark. None has explained to us the extraordinary quality of these cattle sold by Mr. Ronick, in Chillicothe, for 2825 dollars a-piece, and at Mr. Sherwood for 500 dollars.

The conclusion of every reflecting farmer is, that the soil has to supply the necessary material to produce milk. In proportion as the soil is improved, so is the stock of cattle improved and the quantity and quality of milk. That is an incontestible fact. Farmers who have some hundreds of dollars to spare and should be tempted to procure these extraordinary breeds of cattle, first should consider if their soil possess the proper ingredients, to produce that great quantity of milk, unless the seller of such high priced cattle should prove that those cows possess that extraordinary quality, to draw the supply for the production of milk from the atmosphere. If they don't possess that quality, the sale of such high priced cattle is an unfair deception to extort money for which no real value is given.

If Mr. Myers, who bought, at the Chillicothe sale, Lord Nelson for \$2825, had spent that money in guano, poudrette, bone dust, gypsum and lime, on his land, it would have improved his stock more than a dozen of such Nelsons. That with some cows the milk organs are better developed than in some others is admitted, but that is not inherent to a particular breed but found in all the different breeds. Mr. Guen-

on's system, to judge the quality of cows, could give us more substantial information than English herd books of pedigree with pompous names. I see in the list of premiums of the State Agricultural Society, a premium for Holstein Cattle. There is no such thing as a particular Holstein breed. Fine cattle are found at the mouth of the Elbe, the same as you find the Normandy cattle, the finest in France, at the mouth of the Seine. as you retire from the rich borders of the Elbe into the interior of Holstein, you find the cattle poor. The Holstein herdsman knows nothing of pedigree, &c. To prevent breeding in, he buys cattle at a distance, to cross his breed and renovate his stock. When it has enjoyed that extraordinary rich pasture for a while it becomes Holstein cattle, and produces that fine flavoured butter so celebrated in Germany and England; which is not owing to the particular breed, but to that rich soil whereon the cattle pasture:

H. SHUBERT.

Bethel, July, 1853.

Hints on Thinning Fruit.

The prospect of an abundant fruit-crop throughout most of the fruit growing regions of this country have scarcely ever been better, according to the best information we can obtain, than they are the present season. Everything looks promising. Last season the crop was very light generally—in many localities a total failure; and this will contribute much to the abundance of this season's crop.

Now we wish to offer a few hints in regard to certain precautions, which the circumstances call for; that is, provided the crop will be as heavy as we have reason to anticipate. It is very well known that in favorable seasons, after a failure especially, trees bear too much. It is very common to see them so loaded with fruit as not only to cease growing entirely, but to bend and break down under its weight. This should be guarded against. Trees are in a multitude of cases enfeebled, broken, contract diseases, and are, in short, ruined by excessive bearing; and every man who appreciates the value of a full grown bearing fruit tree worth from \$100 to \$500 as the case may be, should guard against such a result as carefully as he would his ox or his horse against excessive labor that would be certain to injure or kill them.

Trees, like animals, have constitutions that can by proper treatment, be kept sound for a great length of time, or by neglect or bad treatment broken down. Our opinion is that the feeble, diseased, and short-lived condition of the peach tree in New Jersey is due, in a great measure, to a greedy or careless system of over-cropping. We know how races of men and horses degenerate, from hard labor and bad treatment—how they dwindle down in size, lose their proportion, symmetry, and intelligence—in short, wear out, to use a very common but expressive term. Trees "wear out," too. How many we have all seen that in their youth, even before they had arrived at a full bearing age and size, began to look old—the branches twisted and knarly, the bark rough and mossy and all covered with small, feeble, ill-formed fruit spurs, loaded perhaps with small, worthless fruit, not worth picking up.

Now those who desire to guard their trees against

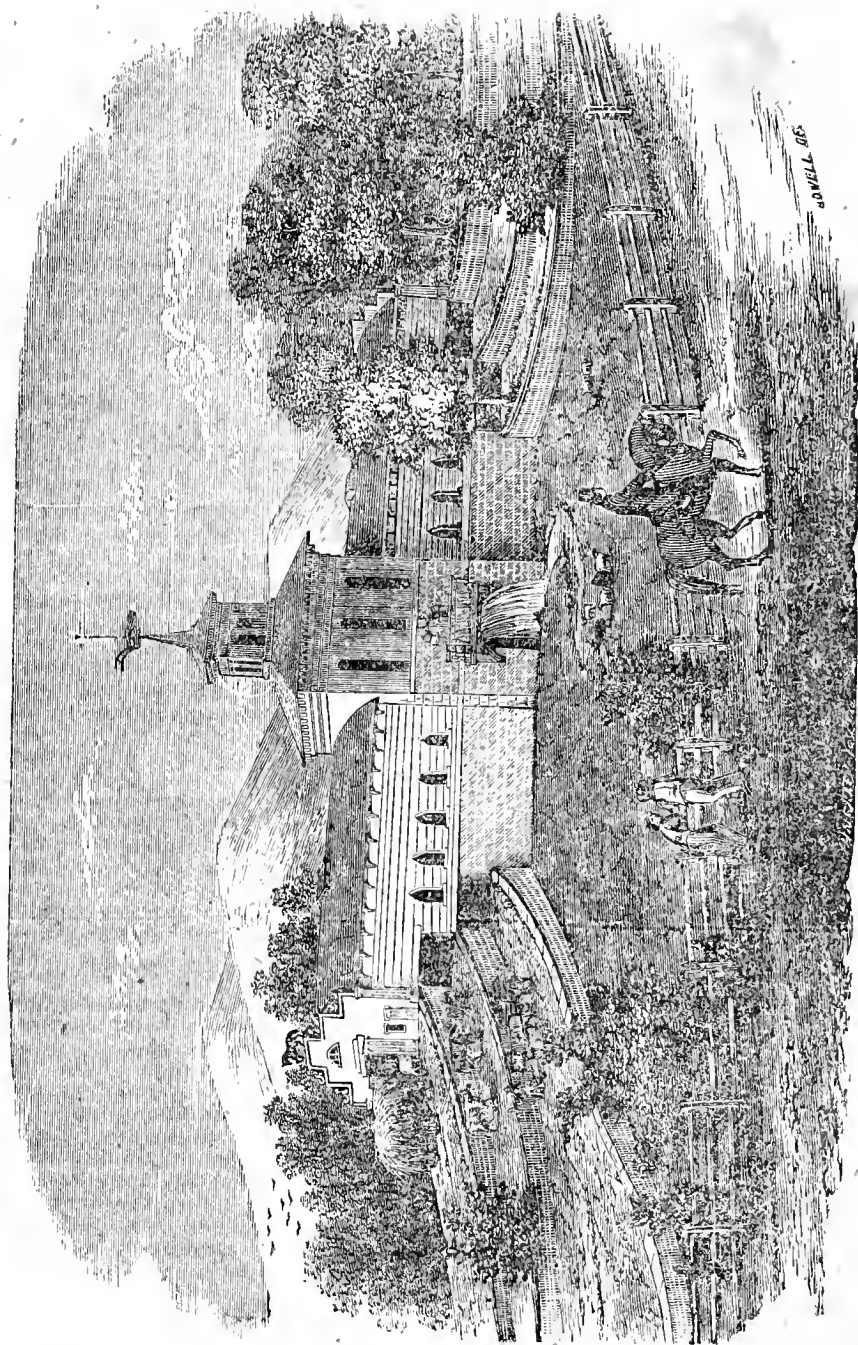
wearing out, must not be too greedy of a great crop. They must master that natural reluctance we all feel to pick off a portion of the fruit. They must thin them out so as to leave them evenly distributed over the tree, and only so many as can be brought to full and perfect maturity without injury or death to the tree. But we shall be asked, "How are we to know how many we ought to leave or how many to take?" Well, we confess it takes some little skill and experience to thin a crop judiciously, but he who goes about it in earnest will find some indications to aid him. It will not do to thin in all cases alike, because the vigorous tree, in a generous soil, will carry a large crop without injury, and that would be almost certain death to a delicate or feeble tree having limited resources in the way of food, just as a healthy, robust, well-fed man can perform a day's work with ease, that a weakly, ill-fed man dare not attempt. The growth of a tree, the appearance of its foliage, the length and thickness of its young shoots, afford a very reliable guide as to the vigor of a tree and its ability to bear a heavy crop. Some varieties are naturally moderate and constant bearers, and if kept under good culture might never require thinning, while others bear enormously some years, the fruit actually covering every part of the tree and requiring props and supports to keep it from being torn to pieces. Such trees cannot bear so in successive years, nor can they long remain healthy. Then beside thinning the fruits, good culture must be given them in their fruitful years, and top-dressings of compost in a well-decayed state. Garden trees may have liquid manure and mulching instead of top-dressing. Such care as this, not costing much, will not only sustain the vigor and health of trees, but produce large, handsome, marketable fruits. When a tree is loaded to breaking down, one-half or three-fourths of the fruit is worthless, and all the advantage of a large crop is lost.

We consider this subject of much importance to the fruit grower. We know by ample experience that it is. We crop our own trees heavily, perhaps too heavily; but every season we have to perform a thinning process, and we should consider the neglect of it nothing less than the wilful destruction of our trees.—*Genesee Farmer.*

Weevil on the Potato Stem.

An insect of the curculio family, described by Say as *Baridius trinotatus*, was discovered some time ago by Miss Morris, of Germantown, Pa., on her potato stems, which were much injured by it. Specimens were sent to England to ascertain if such an insect had been found there on the potatoe. J. O. Westwood states in the London Gardener's Chronicle, that no weevil has been known to reside in its early state on the Potato, and that the facts as stated by Miss Morris are new to science. The weevil deposits its eggs near the root of the leaf, whence the insect works its way down, eating out the pith till it reaches the potato itself.—[N. Y. Agricultor.

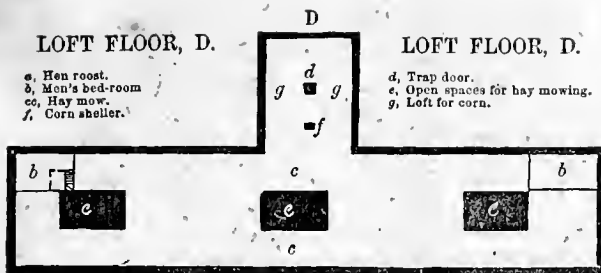
IMPLEMENTS AND TOOLS OF HUSBANDRY.—Examining these *yourself*, and have them put in first-rate order. See, too, that you have an ample supply to answer all your farming purposes throughout the coming season; don't wait until you want to use an article; put it by at once, and be sure to get the best, and most substantial, as it is always cheapest in the long run.



CASCADE BARN--Designed By J. Wilkinson, for David Leavitt, Esq.

LOFT FLOOR, D.

- e, Hen roost.
- d, Men's bed-room
- co, Hay mow.
- f, Corn shelter.



LOFT FLOOR, D.

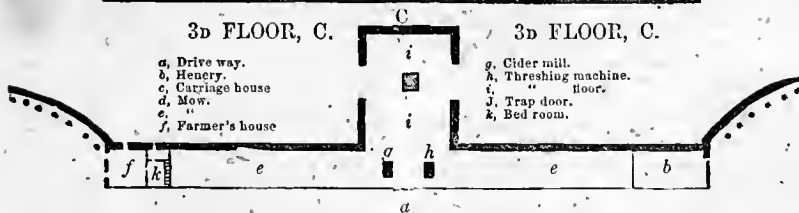
- d, Trap door.
- e, Open spaces for hay mowing.
- g, Loft for corn.

3D FLOOR, C.

- a, Drive way.
- b, Hencery.
- c, Carriage house
- d, Mow.
- e, " "
- f, Farmer's house

3D FLOOR, C.

- g, Cider mill.
- h, Threshing machine.
- i, " " floor.
- j, Trap door.
- k, Bed room.

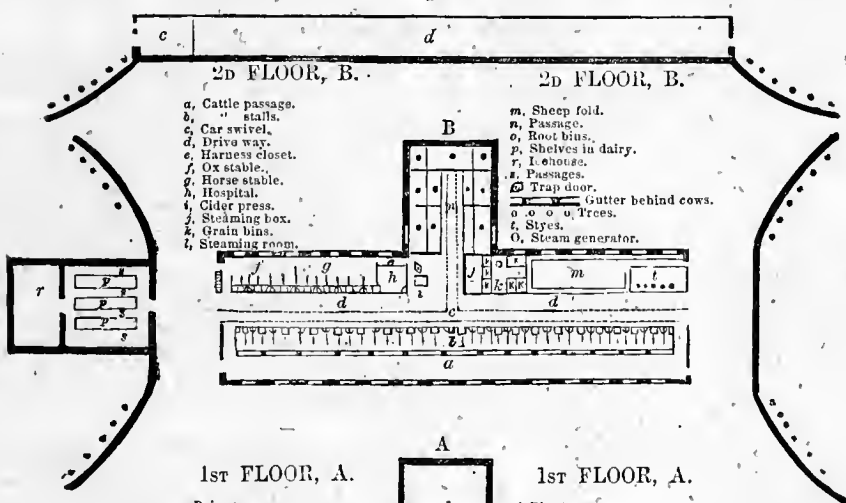


2D FLOOR, B.

- a, Cattle passage.
- b, " stalls.
- c, Car swivel.
- d, Drive way.
- e, Harness closet.
- f, Ox stable.
- g, Horse stable.
- h, Hospital.
- i, Cider press.
- j, Steaming box.
- k, Grain bins.
- l, Steaming room.

2D FLOOR, B.

- m, Sheep fold.
- n, Passage.
- o, Root bins.
- p, Shelves in dairy.
- r, L. house.
- s, Passages.
- t, Trap door.
- u, Gutter behind cows.
- v, o o o o, Trees.
- w, Styes.
- x, Steam generator.

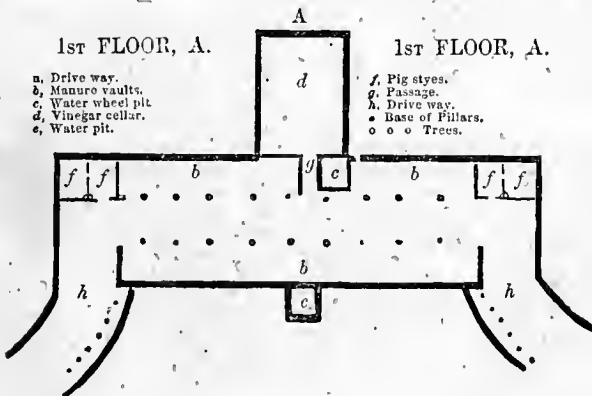


1ST FLOOR, A.

- a, Drive way.
- b, Manure vaults.
- c, Water wheel pit.
- d, Vinegar cellar.
- e, Water pit.

1ST FLOOR, A.

- f, Pig styes.
- g, Passage.
- h, Drive way.
- i, Base of Pillars.
- j, o o o, Trees.



Description of the Illustrations

Of the elevation and ground plan of "CASCADE BARN," designed by J. Wilkinson, for David Leavitt, Esq. To be erected at "Brookside" in the township of Great Barrington, Berkshire County, Mass., and to be completed by September, 1853

The site of this barn, being across a ravine, through which flows a perennial stream, sufficient for a saw mill, and the banks being of a sufficient height and boldness to admit of entering the third story of the building in the gables at either end, with any easy grade, and of driving teams through from either way—it possesses advantages as desirable as they are rare. The view of the elevation is from the N. W. The length of the upper or third story, is to be 200 feet, and just spans the ravine; the second story 160 feet; and the first 120 feet. The height of the respective stories, beginning with the first, is 13 feet, 12 feet, and 15 feet, and from the top of upper girth to peak, 14 feet more; whose height of from floor of basement to peak, 54 feet.

The roof is to be a true arc, of 40 feet span, (the width of the building,) and rises 16 feet; the material for it is to be the best "leaded tin" with a well proportioned cupola in the centre, and two large sky-lights.

The material of the building is to be wood, except the lower story, on both sides, and the second story on one side, which is to be stone—the latter wall, two stories in height, to form the wall of the dam of a pond for water-power, ice and fish, as well as that portion of the wall of the building, thus serving a double purpose, and economising in a great degree in both material and labor. All the stones for the walls, and the major part of the timber, are to be obtained from the farm.

By building the basement story but 120 feet in length, and projecting the second one over it 20 feet at each end, and again projecting the third story over the second in like manner, and by building curved terrace drive-ways in the banks of the ravine, which diverge on the lower side of the building, an easy ingress and egress is provided to each story, entirely through which, teams and vehicles may be driven.

The basement is designed for storing manure, exclusive of the room required for the water wheel, which is to be overshot, twenty horse power, a drive way 13 feet wide, the entire length of story, and a narrow passage to a vinegar cellar, as seen at *d*, in ground plan A. This cellar and that directly over it, each 12 feet in depth, are under a part of the building, projecting laterally from the main building into the embankment on the upper side, or towards the pond, and are 30 by 40 feet. The cellar level with the second story, is for roots, and may be entered without ascending or descending—the convenience of which for conveying roots from the cellar to the stables in the second story, to which it is mainly devoted, will be too obvious to need a comment.

The roots are precipitated into the bins, *o*, at the cellar through a trap door in the floor B. They fall from the carts through the trap door, as seen in ground plan B, upon a double, movable, oblique riddle made of $\frac{1}{4}$ inch wire. The length of the upper riddle being 2 feet greater than the under one, and the meshes of it larger, so that it, (the upper one,) will convey the larger roots to bins next to the walls, the dirt and the smaller roots falling through it, and the latter being deposited into an inner row of bins, the dirt falling into a funnel shaped hopper attached to the lower side of the riddle, which deposits it into a car, that is also used on the rail-way on which it stands to receive the dirt, for conveying roots, cut fodder, &c., to the cattle for feeding.

All the manual labor required in feeding the cattle with roots, raw or steamed, or chopped to ider, roots, meal, &c., mixed and steamed, is to run a car which contains 35 bushels of provender, before the line of cattle, about 50 in number, and shovel the food into the feeding boxes.

The feeding boxes are of cast iron, quadrant shaped, of about one bushel capacity, and there is one to each stall. These boxes are placed one on each side of a partition, that divides two stalls, and are each attached at the right angle corner of the box to the front partition stud by hinges, so that the boxes may be swung around into the feeding hall, in front of the cattle, and over the feeding car, that the feed which spills in filling the boxes, may fall into the car instead of on the floor. After the boxes are filled they are turned with a slight touch before the cattle again. In the centre between the next or adjoining pair of stalls is an erect cylinder, two feet in diameter at the bottom, and one foot eight inches at the top, which projects equally into each stall, and extends from about a horizontal line with the tops of feed boxes; (on the opposite side of the stalls,) to the upper surface of the hay-loft floor, directly over the cattle, that it may be filled with hay from that floor and thus avoiding all the inconvenience and loss occurring when the hay is thrown from the mow to the cattle floor before it is fed.

The tube is made of pine staves three-quarters of an inch thick, put together and hooped up like an upright churn. There is a circular aperture six inches in diameter in each side of the hay tube, at a convenient height from the floor, so that two animals may eat from the same tube at the same time. Under the tube is a drawer into which all the loose hayseed falls through its latticed bottom; which drawer when full is emptied; and when a large quantity of seed accumulates, it is cleaned for use or market. The seed thus obtained is of a super-

rior quality, and the quantity ordinarily saved by this arrangement will pay for all the manual labor required about the building throughout the year.

Across the front of the stalls there is also an ordinary box manger, directly under which, and running the whole length of the stable, is a trough for water, with suitable openings in the bottom of the manger through which the cattle may be watered by removing the iron slides that close them, which is done by means of a lever, opening the line of slides at once and in an instant. The economy of this arrangement will be apparent to all.

Many will doubtless say that such facilities for watering stock can rarely be provided. But to such I would reply, that even when the site of the building is level, and without any running water, I have a plan for a rain water cistern that will serve the same purpose without the use of a pump. [A detailed description of this cistern, being foreign to the subject matter under consideration cannot be embodied in it.] The stables are lighted by large windows in the rear of the animals, through which also pure air has ingress, and the rarified or impure escapes through ventilators in the roof.

On a plane with the stable floor, and only 20 feet distant from the stable, (that space being under a 20 feet projection of the upper story) is the dairy or milk cellar. It is made by arching over an excavation under the northern entrance to the third story. The length to this cellar is such that ample room is provided for a dairy, wash and churning room, a milk vault of proper capacity to contain the milk of 50 cows; and in the extreme rear of the vault, is a spacious ice house, opening to the milk apartment, which is ventilated by iron pipes masonry into the arch and projecting to the surface of the ground, the top of the tubes being covered to exclude rain, &c. There are also iron ventilators laid in the pavement of the dairy, open at the base of the outer wall, providing ingress for pure air at the bottom. The importance of the thorough ventilation of a dairy house is not generally understood—or if understood, is not heeded.

[The designer of this plan of buildings is convinced from 30 years experience and close observation, that the best "spring-house," for the dairy, is one without water—as the desired temperature can always be attained by increasing the depth of a cellar.]

The refuse of the dairy—the whey, sour milk and buttermilk—are all emptied into an enamelled iron funnel connecting with iron leaders that convey it to a reservoir in the feeding hall of the pigsties. The churn is a revolving cylinder, the churning power is that used for all other purposes in the building, water. The whole arrangement of the dairy department of this farmstead, it will be seen, is such that all operations can be performed with the least possible exposure and labor, and the greatest profit.

When the roots are to be steamed for feeding, the car is filled in the root cellar, by running it under the front of the bin from which the roots are to be taken, and by lifting a slide in front of the bin, the car is filled, after which it is run out into the steaming room by the side of the steaming box, when the body of the car containing the roots is hoisted by water power to a level with the top of the steaming box, at which point it strikes a hook that precipitates its contents into the box.

The roots are steamed whole, and the box filled with alternate layers of roots and chopped fodder; the latter falls into the box from the floor over it. The form of the steaming box is cylindrical—the length ten feet, the diameter four feet. It is hung on journals attached to the centre of each head, one of which has on it a pulley for a belt.

When the contents of the box are sufficiently steamed, the bran, or meal, designed to be mixed with them, is put into the box, and four cannon balls of ten pounds weight each are also thrown in, the door closed, the belt adjusted, and the power applied. It is revolved gently until all the ingredients in the box are thoroughly incorporated and reduced to a pulp, in which form they are fed to both cattle and sheep. When thus prepared, the contents of the box are drawn out into the car, by placing it under the box, and opening the door—after which the car is run before the cattle and the steamed meslin fed while warm.

The third floor C, is occupied by a drive-way *a*, 13 feet wide the entire length of the building; *c* carriage house, *b* henery, *d* and *e* mows for hay, grain, &c., *f* farmer's house, *g* cider mill, *h* threshing machine, *i* threshing floor, *j* trap door, *k* lodgings for workmen.

There is a line shaft extending the entire length of the building in the peak, on which are drums two feet in diameter, at intervals of 25 feet; each of which is supplied with a strong rope attached to a power pitching fork, and when required, six or eight loads of hay may be unloaded and placed in the mows at once, dispensing with all manual labor except to insert the fork into the hay of the vehicle. Another advantage of this line of drive-way, is, that it admits of driving eight or nine loads of hay under shelter in case of a shower, or at evening to be unloaded in the morning while the dew is on, in which state grain nor grass should ever be cut.

The loft of the building over the root cellar is used for a corn crib, and is open to the loft of the main building, so that corn may be shel-

led and cleaned in this left, and be carried by elevators and conductors to the grain bins in granaries near the carriage house. The lower story of this side building is used for sawing wood, boring fence posts, &c., and is supplied with a work-bench, turning lathe and other necessities of a carpenter's shop.

The machine for chopping hay, straw and stalks, is on the left of the main building near the mows, and all the straw and stalks are chopped for litter, as well as for feeding. The machine is designed to cut ten bushels per minute, and will receive and chop whole bundles of stalks as fast as a man can place them in the box.

An iron pipe, seven inches in diameter, is laid in the dam, and runs through the building under the floor of the second story, in which it may be tapped at any point where water is required in the building. It is also to have a coupling for a hose on the underside of it, directly over the culvert, which conveys the water from the water-wheel, for the purpose of washing vehicles, roofs, &c.

The vehicles stand on a lattice bridge, in the drive way of the lower story, or cellar, over the culvert, so that the dirt falls into the culvert and is washed into the Housatonic river, which is within 400 yards. Among the numerous advantages of this arrangement for washing vehicles, is that of admitting of the work being comfortably performed, when the weather is so cold or stormy out of doors as to render it impracticable, and by the use of a large hose with 24 feet head, the work is greatly facilitated.

The cost of this immense building, serving as it does, for a farmer's house, lodgings for farm laborers, the dairy, and all the purposes herein before mentioned, water-wheel and machinery, &c., is estimated at about ten thousand dollars, and it is believed that it will far exceed in point of convenience, economy of labor and general profit, any building of the kind in this or any other country.

The Designer and Architect, of this building would respectfully solicit orders for plans for *Farm Buildings* of every description, in any part of the country. Having given much attention to the subject for years, he has on hand a variety of plans adapted to all peculiarities of site and systems of farming, which he will furnish on reasonable terms. It is very encouraging and gratifying to him, and must be to every intelligent gentleman who is a landholder, that the improvement in this important branch, of agriculture, hitherto so defective, and so little understood, is now beginning to enlist the attention of gentlemen of means, by whom much will be done in a few years for the melioration of the condition of the American Farmer, to whom this plan is respectfully submitted by the author.

JOHN WILKINSON.

Great Barrington, Berkshire co., Mass.

Late Principal of the Mount-Airy Agricultural Institute, Germantown, Pa.

Reaping and Mowing Exhibition.

As there is a very general interest felt to know the result of the trial of these machines, which was advertised to come off at Flowertown, Montgomery county, it may be stated that it was not so satisfactory as had been expected, only two mowing machines being entered. Ketchum's, and one manufactured by Lee, Pierce & Thompson, Ercildoun, Chester county. The former seemed to give most satisfaction to the large number of farmers present, doing its work well, where it had a fair chance, but the grass, (timothy,) was quite thin, and was much tramped down by the spectators. We know of several of Ketchum's machines in use, and working to entire satisfaction. It is perhaps the best *mower* now out, at least in this part of the country, and will cut an acre of grass readily in twenty to thirty minutes, one man and a pair of horses is all that is required to manage it.

Three reaping machines were entered, two of Hussey's, and one in combination with the mower, by Lee, Pierce & Thompson, the grain being a heavy crop of rye. The latter received the premium of \$50. Hussey's was objected to by many, on account of throwing the grain behind the machine, requiring

the track to be cleared by the binders, before the cutting of the next swathe.

It is much to be regretted, manufacturers and patentees did not avail themselves of this opportunity of exhibiting the practical working of their machines. There is a wide spread feeling of interest about it, and this season's difficulty in procuring labor, makes it a matter of certainty, as well as necessity, that by another year there will be a very large demand for them. The only hesitation among farmers is, as to which is the *best*. New patents for them are multiplying all over the country, the *last* invention of course always being superior to its predecessors.

The *Prairie Farmer*, published at Chicago, speaks highly of Danforth's mowing machine, as able to "cut any thing that is *cuttable*" with the scythe, no matter how thick or matted at the bottom, old or young, wet or dry, and may be driven three days without the application of a whetstone." Price for mower, \$100; mower and reaper, \$115.

We also see advertised in New York papers, Faber's grain harvesters, Schonebley's reaper and mower, and Atkin's self-raking reapers.

The inventive genius of the country seems always equal to any emergency. Let it only be ascertained that a certain implement is *wanted*, and they will accumulate almost like the "improved" cooking stoves, and bee hives. We think the price of reaping and mowing machines has been too high heretofore. The expense of construction will warrant a considerable reduction, and the amount of sales in consequence, will more than make up the difference.

We believe there was to be a trial exhibition in New York the past month, the result of which we shall advise our readers. Manny's reaper and mower, which has a high reputation, and took the first premium there last season, was not brought to the ground at our late trial in Montgomery county.

Guano and Super Phosphate of Lime for Wheat and Grass.

One of our subscribers, James H. Alexander, of Mifflin county, writes us for information about applying Guano for wheat. He inquires, is 200 lbs. of No. 1, Peruvian Guano, equal to the usual dressing of barn-yard manure? How can we judge of the quality of Guano? How is it prepared? At what price can it be obtained? Is it as certain as barn-yard manure?

Most of the answers to above questions, will be found in our present number, by farmers in this county, who speak from their own experience, and whose statements are entirely reliable. Much more of the same purport could be given.

The best way for *farmers* to test the quality of their Guano, is to be careful of the sources where they purchase it. The only preparation needed, is to pulverize the lumps on the barn floor or in a box

with a mallet. The price of Guano varies from \$45 to \$50, according to the supply in market. As to the certainty of its effects, we consider it much more certain than ordinary barn-yard manure, which has laid exposed to sun and rain all summer. Guano should be ploughed in as soon as practicable, after being spread. Some farmers prefer mixing it with an equal bulk of plaster.

The subject of special manures, is now exciting great attention. Without entering the field of scientific controversy, as to which of the new fertilizers now before the public is the best and cheapest, it seems enough for us at present to publish such facts and results from the use of one or more of them, as are within our own knowledge. These are what are wanted, and we hope our farmers will communicate their experiments for the general benefit.

James Pierce, of West Bradford, Chester county, applied 300 lbs. of Guano to the acre, last fall, it was ploughed in to the usual depth, and the wheat drilled. Part of the field was dressed with the ordinary quantity of barn-yard manure. The other circumstances, as regards soil, seeding, &c., were precisely the same. The wheat for the Guanoed portion was at least three times greater than the other, and fully equal to a third portion, which received the manure which had been kept under a shed, free from exposure to the weather.

Robert Miller, Westtown township, applied 300 lbs. Professor Mapes' Super Phosphate of Lime to three-fourths of an acre of wheat last Fall, costing him on his place about \$9. On several acres adjoining, he applied barn-yard manure in the usual quantity, and for a third strip he purchased and hauled from West Chester, four miles distant, about the same bulk of stable manure. This latter he estimated, to cost on the land \$45 per acre. The wheat on both strips was much better than where the barn-yard manure was used, the straw brighter and stiffer, and on the part where the Super Phosphate was applied, the grass, was decidedly better than on either of the others. Four years ago, on the same farm, Guano was ploughed in for wheat, 300 lbs. to the acre, on alternate strips. The grass this season, on the guanoed portions, is more luxuriant, and much better than the others, and can be detected at a glance.

Abraham Bailly, near Parkersville, applied to his wheat last fall, on different portion of the field, Guano, barn-yard manure, manure which had not been exposed, and Professor Mapes' Super Phosphate, of Lime. The latter could not be obtained till the wheat was up some three or four weeks, and was sowed on the surface, and the thinnest part of the field. The wheat on it was equal to where the shed manure had been put, and the grass, wherever it had been sown, or even dropped in different places, for experiment, was so far superior to all other parts, as to be observ-

ed at a distance, before coming on to the ground. We walked over this field, and the difference was very striking. The wheat was heaviest, as the stubble indicated, where 300 lbs. of Guano to the acre had been used, but making all allowance for the difference in the soil, and time of applying it, not superior, as the owner remarked to us, to that dressed with the Super Phosphate, while the luxuriance of the grass on this last, seemed to give it the preference. It was also used at the rate of 300 lbs. to the acre.

Jonathan Gheen, of East Goshen, used 300 lbs. Guano to the acre, and both wheat and grass are much better from that portion, than where the best shed manure was applied. The usual quantity of barn-yard manure to the acre applied in Chester county is fifteen to eighteen ox cart loads.

John Jackson, of East Bradford, sowed down with wheat, one and one-fourth acres of corn stuble ground; on one half he applied barn-yard manure, at the rate of twenty ox cart loads to the acre. The balance he dressed with 160 lbs. Professor Mapes' Super Phosphate of Lime, on this part the wheat was quite as good as the manured portion, and some of it better.

William P. Marshall, of West Goshen, informs us that he top dressed a part of his pasture land, last Spring, with Professor Mapes' Super Phosphate of Lime, at the rate of about 300 lbs. to the acre,—the results of which are highly satisfactory—tully confirming the reputation of this fertilizer as a most excellent top dressing for grass. Upon the part of the field where the Phosphate was sown, the grass grew much more rapidly and vigorously than on the other part—so much so, that the difference was plainly visible at some distance from the field. And what is quite remarkable, the cows showed a very decided preference for the grass on which the Phosphate was sown, always passing directly to that part of the field when turned into the pasture.

Crops in Lancaster County.

Our old friend and correspondent "J. B. G." of Mountville, Lancaster county, Pa., thus writes respecting the crops in his neighborhood: "In this section of our county, grass has made a full crop of hay. Our winter grain, although considerably damaged by the fly, has nevertheless turned out, we may say, an average crop, and being much lodged was troublesome to harvest,—but having fine weather, was all secured in good condition. The berry of the wheat is very full and plump, and will make first-rate flour. No mildew or rust attacking the straw. Our oat crop never was better. Owing to a spell of dry weather, our corn, potatoes, grass, garden vegetables, &c., are suffering,—but as the rains have commenced to-day, we look for a renewal of vegetation.

As to fruit, apples will be few, but we have cherries, pears and peaches in abundance."

Agricultural Address by William Hartley, Esq.

We regret having room only for the following extracts from an excellent address, delivered by Wm. Hartley, on the 2d of May last, in the town of Bedford, before the Bedford County Agricultural Society. There are other counties in our State, where the farmers want "waking up," to avail themselves, to better advantage of their fine soil, and fortunate location, near the line of public improvements. As is remarked, hucksters and traders are every year working their way farther west from the Atlantic cities, in quest of eggs, poultry, butter, fruits, &c., to places heretofore inaccessible. The whistle of the locomotive, with its long trains eastward and westward, has broken upon the stillness of our forest homes, and brought many a fertile farm within easy reaching distance of a good market. Our farmers in the interior should indeed "wake up" to this new state of things, and see what kind of produce will yield them the best return.

As "the strength of a Nation depends on its Agriculture, and by it, its independence is secured," in the same ratio stands the strength and independence of a county. And until the farmers of Bedford county wake up and do something for their benefit, all pulling together, we will be more prosperous, and, perhaps, may be in a worse condition, if worse can be. Let us endeavor to gain all the knowledge of our vocation that we can—let us keep the best of stock, especially of such animals as are adapted to our climate—and, Sir, any man that is able to keep stock at all is better able to keep good stock than bad—though it may cost more at first, in a short time his money will come back, bearing with it a big profit, and we need not fear that by the time we become possessors of a fine breed of animals that prices will decline. Not so!—fine stock even in old England still commands its former prices—and fine stock every where will always bring high prices, at least until after all who are in this house have returned to dust. In the Eastern States men who have been notorious for rearing fine animals for twenty and thirty years back, still receive high prices—still are amassing wealth from this source, and by it benefiting their fellow men.

Then, let us, in the first place, *judiciously improve our stock*. Why keep one of these *long-nosed, land-shark, sun-fish breed of hogs*, when a better, less mischievous, easier kept animal, can be procured at a cost comparatively but little higher. Let us improve judiciously, but not extravagantly, our farms, and, my word for it, in a short time railroads, plank roads, and all this sort of thing will come to us. Let us do our part, and there is no doubt but that Commerce will be wide awake to her interests, and channels of various kinds will be opened for the interchange of commodities. Yet, Sir, there is great reason to believe that our present amount of produce, though limited compared with what it might be, and our natural advantages are such that we should not wait for a railroad to come to us—but that we should with united effort, make one, which will hasten the prosperity which we, by following this course, will be sure to acquire. In a few years we will be deserted by the western cattle, which consume so much of our hay, corn and other produce, and affect the market to a considerable extent, directly and indirectly, throughout the whole country.

And, Sir, should a railroad be made to connect with either Broadtop or any other road, which would open a direct channel to the eastern market, and pass directly through our county, our best market would be the iron works, which would spring up in every part of our county. Forges and furnaces would arise in every recess of our mountains, giving labor to hundreds of men and horses, and thereby consuming the produce of the farmer. Hucksters would spread over our county, buying our poultry, butter, eggs, and even many things which every farmer now lets go to waste. (Witness the price of butter and eggs last winter, which was caused by the fact that these traders came, in some instances, fifty miles from the railroad depots, and offered these almost unprecented prices.) Besides, our land would be valued almost, if not entirely, as high as if it were in Chester county, for, while our Chester county farmers are hitching up and driving to market, we could have our produce there in nearly the same time, perhaps with little greater expense, but, all things considered, with at least equal profits.

The Delaware Horticultural Society

Will hold its Annual Exhibition on Wednesday and Thursday, the 14th and 15th of September, in the Odd Fellows' Hall, Wilmington. The schedule of premiums for the occasion is quite liberal and extensive, and if we may judge of the previous displays of the Society, the coming Exhibition will be well worth visiting. The Society will pay the cost of transportation upon all articles from a distance, sent by public conveyance. They may be addressed to William Canby, No. 131 West street, Wilmington.

List of Patents—New Butter Worker.

The continuation of these, is unavoidably crowded out this month. Hereafter we hope to insert them more regularly. Among others of great interest to farmers, we observe a patent has been granted to our friend, E. J. Diekey, of this county, for an improved butter worker, which, from what we have heard of it, will be a very complete affair. A really good article for this purpose, dispensing with the use of the hand to the butter, has long been wanted. We shall advise dairymen, so soon as they are ready for sale, and where they can be obtained.

Centre County Agricultural Exhibition.

The annual exhibition of the above Society will be held on the 5th, 6th and 7th days of October next. Place not stated. We have received a list of premiums, embracing stock of all kinds, including mules and jacks, agricultural implements and productions, dairy and honey, fruit, vegetables, bacon and hams, household manufactures, flowers, and a ploughing match. The list of judges, and regulations for the fair are also published.

Feeding red pepper to the hogs with their food, is said to be good for the kidney worm.

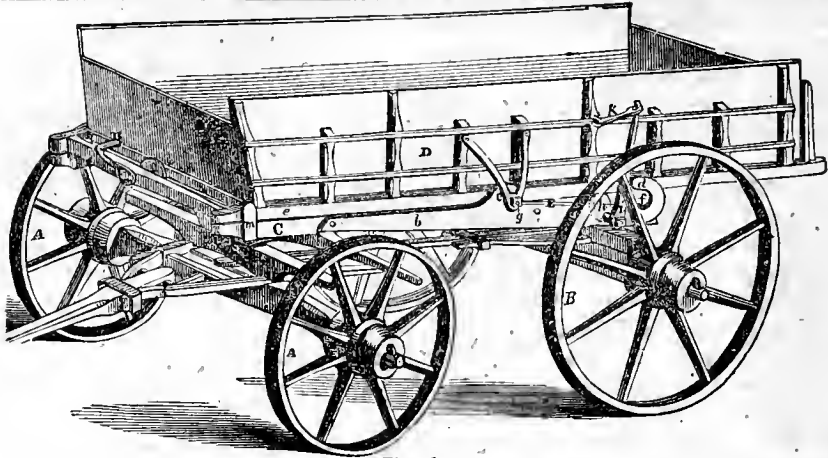


Fig. 1.

Dumping Wagon.

The accompanying engravings represent an improved Dumping Wagon; patented August 3d, 1852, 1852, by Mr. Thomas Castor, of Frankford, Philadelphia county, Pennsylvania.

This valuable improvement possesses many advantages over all the wagons of the kind hitherto invented. It is becoming a great favorite among farmers and teamsters, and will eventually, in a great measure, take the place of carts, and the ordinary farm wagon. It combines all the properties of a burden wagon, with the facility of dumping its load with much more ease than the ordinary cart. It is simple in its construction, and therefore not so liable to get

out of repair. The facilities of discharging its load are not at all effected by an increase of weight. Mr. William W. Smedley, of Whitehall, Pa., who has been using it for some months, says that his team can haul (and teamster dump) with as much ease 6500 lbs. on the wagon, as 5000 lbs. on an ordinary cart. And Mr. Minor Rogers, Aramingo, Pa., after having given it a fair trial in hauling lumber, coal, wood, stone, lime and various other heavy materials, recommends it to the public as having exceeded his expectations in many respects, particularly in the ease with which heavy loads can be discharged. And all who have yet tried it, recommend it for usefulness and economy. The principle can be applied to burden

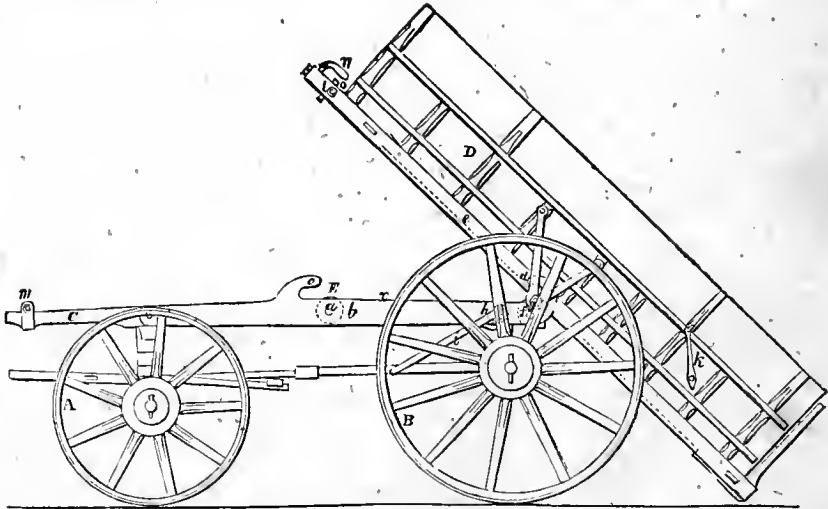


Fig. 2.

cars for railroads, heavy ox cart, or to burden wagons, for any purpose, at a small additional cost. Farmers and others are requested to examine its construction, and try it for themselves.

Figure 1 represents a perspective view, and figure 2 a side elevation of the wagon.

A A are the front wheels, and B B the hind ones, C C being the side timbers of the frame. D is the

body, which is balanced on anti-friction rollers, E, which turn on a rod, extending across the frame, F; the said rollers form a fulcrum and bearing for the wagon body to rest upon and slide over, as heretofore shown, and they are so situated in rotation to the length of the wagon, that the body is balanced upon them in the manner of a scale beam, so that a small weight upon either end will tip or tilt the other end

of the body. An outside plate, *b*, is bolted to either side of the frame or pieces, *C*, and is formed with hooks and stops, *cd*. The side timbers, *e*, are faced with metal forming runners, or rails for balancing the wagon body upon, and on which it moves over the rollers.

An anti-friction roller, *f*, is hung in the back extremity of both the side pieces, *C*, projecting slightly above their top surface; upon either side of the body, *D*, is braced a stop pin, *g*, which projects from the side timber, *e*, and when the body, *D*, is brought home for loading, as in figure 1, serves to determine its proper position by striking and bearing against the hooks, *c*. These pins also form trunnions for the body to turn upon, in dumping the wagon, by catching within the lower hooks, *a*. A cam, *h*, is fitted to work through either side piece, *C*; these cams are mounted on a shaft extending across the frame, which shaft is operated by the lever, *i*, so that on turning the lever upwards, as in figure 1, and securing it by a strap or catch, *H*, the cams, *h*, slightly lift the back end of the wagon body, and support it, but when the lever, *i*, is turned down, as in figure 2, the cams permit the wagon body to descend and run backward: *ll* are lock-rods attached to discs or double cranks, *o*, which are turned by the lever, *m*, and work longitudinally to lock and unlock the body by sliding through *e*, within catches or openings formed on the standards, *m*, as represented when it is desired to unload the wagon; the lever, *n*, is turned, unlocking the body of the carriage, and the lever, *i*, brought down so as to permit the body to fall upon the rollers, when a slight pressure by the hand will carry the body backward, and prepare it for unloading, which is easily done by the hand. When unloaded depress the body at *n*, and bring it to its place, then raise the lever, *i*, and lock the standard, *m*, and it is again ready for re-loading.

Further information may be obtained by letters addressed to the patentee, Frankford, Philadelphia county, Pa.

A Chester County Hay Crop.

WM. DRIPPS, of Midway, in writing to us upon other matters, mentions incidentally his crop of hay, which is worth taking note of. He says, "all my crops are heavy and have been got in, so far, in excellent condition. I had not over eighteen acres in grass, from which we took off forty-nine large loads of first quality hay—making over fifty tons. From one of my fields which measured 9½ acres with a drill when the wheat was put in, we hauled off twenty-nine large loads—over thirty tons of hay."

This last field, it will be noticed, produced over three tons to the acre!! While the whole eighteen acres fall but little short of that yield. Our friend Driggs furnishes a good commentary on his system of farming, to say the least of it.

Sale of the Earl of Ducie's famous Herd of Short Horn Cattle in England.

The Albany Evening Journal of the 11th, states that the subjoined circular was received that morning by the Secretary of the State Agricultural Society. The sale is to take place on the 24th and 25th of August. The announcement will probably possess interest for our agriculturists, and we therefore publish it. Catalogues of the animals will doubtless be sent by the next steamer to the principal agricultural societies of this country.

The late lamented Earl Ducie having requested his Executors to dispose of his Agricultural Stock, Mr. Strafford has the honor to announce that he has been favored with their instructions to sell by auction, without any reserve, at Tortworth Court, Gloucestershire, on Wednesday and Thursday, the 24th and 25th days of August next, the entire and far-famed herd of Short-Horned Cattle, belonging to his Lordship, consisting of upwards of sixty head of Bulls, Cows and Heifers, comprising the whole of the justly celebrated "Duchess" and "Oxford" tribes of Short Horns, which, with the "Fourth Duke of York" were purchased at the late Mr. Bates' sale at Kirkclevington, in 1850; also, the "Duke of Gloster," and many other promising young Bulls and Heifers bred from them, as well as others from the most celebrated herds in the kingdom; with the splendid flock of 800 South Down Sheep, bred from the renowned stocks of His Grace, the Duke of Richmond: Col. Kingscote, Capt. Pelham, Messrs. Ellman, Barclay, Harris, and others; since which have been used the very best Tups that could be obtained from Mr. Jonas Webb. Also, the unrivalled stock of Pigs, descended from the most distinguished breeds in the country.

The character of the above stock may be estimated from the fact that the originals of each breed were purchased without the slightest regard as to price, and will be found to comprise some of the most valuable animals in the United Kingdom; as such they are especially deserving the attention of breeders in every part of the world.

Catalogues, with the pedigrees and other particulars, will shortly be issued, and may be had upon application to Mr. Strafford, 89 Guildford street, Russell Square.

LONDON, June 22 1853.

Chicory.

Our correspondent, F. A. Nauts, urges the cultivation of this plant, *Cichorium Intybus*. In this vicinity, it is considered rather a noxious weed, which the farmers are anxious to get rid of. We doubt much if it will supply the place of a good cup of Java. Von Thaeer speaks of one objection to it in England, that they can't get the plough deep enough to destroy the roots when they want a rotation, and that it spreads very rapidly. Before introducing new plants, it is well to look at the facility of getting rid of them, in case of disappointment as to their profit. Dr. Darlington in his *Flora Cestrica* remarks, "it is justly ranked among the unprofitable intruders."

TO CORRESPONDENTS.—"J. H. B.," in reply to G. Blight Browne, is in type, but was unavoidably crowded out,—will appear in our next.

"A Delaware Farmer" received, and will appear next month.

For the Farm Journal,

Cultivation of Strawberries.

As the cultivation of small fruits is very properly claiming the attention of farmers, residing within convenient access to the large cities, it may not be improper occasionally to record the result of careful experiments whether successful or not, as such land marks are more unerring guides for the uninitiated than mere paper calculations.

Strawberries being the earliest fruit to ripen, can have no competition in the market, and under ordinary treatment will yield large profits to the producer, though varying in magnitude according to the variety grown, the quality of the soil, and the cultivation they receive. The kind most generally cultivated as a market crop is Hovey's Seedling, with about one-tenth their number of large Early Scarlet, distributed throughout the plantation as fertilizers. The McAvoy's Superior is a more vigorous and hardy pistillate plant, and yielded a larger crop of large sized berries, than any other that came under my observation this year. The Genessee and Cambridge are hermaphrodite plants, and bore a full crop of large early fruit, ripening on the 28th of 5th month last, and many of the berries measured from 3 to 3½ inches in circumference; if they continue to be as productive as they were this season, they will be valuable fertilizers.

Having a variety of soil in cultivation, I have grown strawberries on all kinds, from light blowing sand to stiff timothy bottom, and have learned to avoid either extreme, and now select a good loam of medium texture, tolerably high and undulating, so as freely to carry off the surface water, cover it with manure, which should be well incorporated with the soil; early in the Spring mark the rows 4 feet apart 12 to 15 inches distant in them. Put one hermaphrodite to every ten of the pistillates, rejecting the male or barren plants which produce no fruit, but blossom and grow vigorously, and soon over run and crowd out the more fruitful ones.

The beds should be kept mellow and free from weeds the first season, the runners carefully distributed over the ground so as to form the beds with regularity, after which but little culture is needed. I use a subsoil plough, which mellowes the alleys without throwing earth on the plants, the benefits of which are clearly shown, especially in a dry season, by the superior vigor and productiveness of the plants near the edge of the beds over those in the centre; the circumference extending from 12 to 15 inches on either side, and the beds being three feet in width, allowing one foot for alleys, the plants nearly all receive nourishment from the moisture and atmospheric influence absorbed by the soil in the alleys thus deeply pulverized.

In 1850 I planted six acres of Hovey Seedling on the plan above described, in stiff clay land, one-half

of which was low meadow ground, the other ascending to upland, from which were gathered and marketed last year, over 300 bushels of fruit, but in the latter part of summer the timothy and herd grass proved better adapted to the low ground by taking possession, and this year the strawberries there were abandoned, and the grass mown for hay, leaving three acres of upland in strawberries which were dressed, viz: the alleys loosened with a subsoil plough, and the stools of clover, weeds, &c., taken from the beds and placed in the alleys, which served the double purpose of retaining moisture and keeping the berries clean; the yield was 154 bushels of fruit, for which I received \$4 per bushel, and paid 64 cents for picking, and fifty cents (12½ per cent commission,) for selling. Twelve dollars per acre would be a full compensation for the little culture they received, making the account stand thus:

To interest on 3 acres of land at \$100,	\$18 00
" culture,	36 00
" picking 154 bushels, at 64 cents,	98 56
" 12½ per cent. commission for selling,	77 00

\$229 56

By 154 bushels at \$4,	\$616 00
Expenses,	\$229 56

Profit on three acres, \$386 44

Equal \$128 81 per acre.

The first year the plants are set there is no returns, but the value of the plants at the close of succeeding years would be a full remuneration. Were I to draw an estimate from some of my specimen beds, a few rods in length, which are thoroughly cultivated, the results above stated would appear like a failure, but for large farmers, where land is plenty, and laborers scarce, the great question is not how much per cent profit can be made on one acre, but by what mode can the most clear money be made on all the land they have to cultivate with the laborers at their command. Over one hundred bushels of corn may be grown on an acre of ground. Yet more clear money can be made on twenty acres yielding fifty bushels each.

One of my neighbors having but a few acres of land devotes proper attention to something less than three acres of strawberries, keeping the ground well manured, mellow, and free from weeds, the expense of which he has not been able to furnish, but he informed me that he received over \$1100 dollars for the fruit this year.

WILLIAM PARRY.

Cinnaminson, N. J., 7th mo. 20th, 1853.

For the Farm Journal.

What is a Hovey's Seedling Strawberry?

SIRS:—

I dislike to occupy your pages with an objectless controversy; hence I have chosen the above topic to write about. But first allow me to make a remark or two on Mr. Prince's last effusion.

I am now charged with "evasion" and "ignorance." Well, this is better than *downright lying*, with which he charged me in his first; or in his own words, with making a statement as a matter of fact, which "was utterly impossible." I am not without hope that by another effort he will receive me into the company of the *dogmatic and insolent*.

Now, for the "evasion" first. But notice "his reasons!" his "utterly impossible!" his "long experience and never saw it," his "changing a goose into a gander!" "Evade" such arguments! I will let De Grimm speak for me: "See here are arguments of terrible force for children." But I did not mention the "name of Hovey Seedling" in my last. In my first I stated that from pistillate plants of Hovey's in pots, (which I had marked) I raised runners, which produced some pistillate, and some perfect flowering plants. In my second I again referred to the experiment, but omitted for brevity sake, the mere name. What a quibble to object upon! I shall soon expect to hear of Mr. P. being engaged in a discussion as to the number of angels that can walk on the point of a needle.

Mr. Prince may argue to all eternity that my plants were not Hovey's Seedling. I have no hope of ever convincing him that it is not material whether they were or not. They *were* pistillates, and plants with perfect flowers *were* raised from them. The reader will please recollect that the plants were not taken from a bed of plants in the open ground, in which case they might have got mixed, but were taken from pistillate plants in pots, purposely for the experiment, thus rendering any "blunder" generally impossible.

Have I cleared myself from "evasion?" Then, now for the "ignorance."

I am "ignorant of the characteristics of McAvoy's Extra Red, and a dozen other varieties." Where did Mr. P. learn what I know about the "dozen other varieties?" The arrogance that lifts a man up to an imaginary bench, where the knowledge of other men can be judged, "without rule or precedent," is simply ridiculous. And as to the "supposed anomaly" of McAvoy's Extra Red being well known, I have a letter from Mr. Longworth himself, who raised that variety in his own garden, and under his own acute observation, in which he states, that he never saw any tendency of the kind in it, and never heard of it till this season; and that it is the first instance that has come under his observation of pistillate kinds producing hermaphrodite flowers."

Of course I don't expect Mr. Prince to place any value on Mr. L.'s word; an "utterly impossible" will do in any case—except with the public. It must not be inferred from the above extract, that Mr. L. agrees with my views. He will pardon me for quoting him. Though on "opposition benches," his stern love of

justice would shield an other from an unjust attack.

And now, sirs, what is Hovey's Seedling?

Mr. Prince parades with a flourish Mr. Downing's attempt to prove what I have now done. Mr. Downing's observations led him to the conclusion, that Hovey's would, by culture, become an Hermaphrodite. This was denied. To substantiate his statement, he sent his plants to the Boston Society. They decided that the kind was not Hovey's because it was a staminate. Mr. Downing could, of course, say no more—to them; but to the day of his death, so far as ever I could learn, *he* could never be made to understand, that he "began with a blunder."

I ask again, what is a Hovey's Seedling?

When it first came out, a friend of mine received the first plants in Philadelphia, direct from Mr. Hovey. Every care was taken with them, as the reputation of the house depended on their accuracy. Innumerable complaints came in after they were sent out from this stock, that Hermaphrodites "were mixed with them," and my friend could never be convinced of any thing than that the mixture must have taken place in Mr. H.'s establishment; or (which he has believed,) that the sexes change.

Once more, what is a Hovey?

When a portion of one of my finest beds of Hovey's Seedling, and which portion contained *entirely* hermaphrodite flowers, were ripe, one of the strongest advocates of the sexual theory, came to see my strawberries, I pointed out this portion, and told him that I wanted him to name them. After a very careful and close examination he pronounced them to be "certainly Hovey's." I then told him they were Hermaphrodites. He then replied that they *could* not be Hovey's, but *must* be Buist's Prize.

Now, gentlemen, do you understand what is a Hovey's Seedling?

"It is a strawberry that has a pistillate flower." Show these gentlemen a plant with *hermaphrodite* which you have raised directly and unmistakably from a pistillate plant—what then? Not being a pistillate it *cannot* be Hovey. I admit this logic is unanswerable.

Then we have \$1000 offered to any one who can produce "one perfect berry when grown by itself." Who said they could do anything of the kind? The able article by "W. D." in your last, which so clearly set forth my ideas, shows such a thing probable, and the exact knowledge of whether that can be effected or not, desirable. This is the only thing I have read in connection with the subject. Mr. Longworth's offer is not for any thing of the kind, but for an hermaphrodite produced by cultivation from a pistillate plant.

There is something one can understand in an offer like this. M. P.'s offer is really too magnanimous. If his hobby horse cannot come off "first best," with

out such backing, I blush for science. I have read somewhere that,

"All men, till by loosing rendered sager,
Will back their own opinions by a wager."

Well let it go at that.

So now "Messrs. Editors," I have done with the subject for the present, unless some unbecoming personality of Mr. Prince's, should oblige me to recur to it again.

THOMAS MEEHAN.

Breeds of Fowls.

For the Farm Journal.

MR. EDITOR:—

A writer in the July number of the "Journal" propounds "a few queries for fowl connoisseurs.

The one as to "the origin of the so called Chittagong fowl, and whether they may be considered a distinct breed, &c." Of course none but those engaged in importing them can satisfactorily answer. For my part I have seen some large and very fine collections of the three breeds, viz: Shanghai, Cochinchina and Chittagongs, and I have never been able to discriminate so nicely as to point out the distinctive features of the three breeds, and that there is really any very marked difference in them, is a question as yet unsolved in my mind.

I have had what were represented to me to be the three distinct species, and when placed together in the same yard, I could discover really no difference in them.

They are all represented as originating from the same source—a wild fowl of China—and so far as I am informed, derive their names from the respective State from which they are exported, and in my humble opinion there is no distinctive features in either of the three, other than those which persons interested in their traffic are pleased to fancy.

The "boobies," alluded to by your correspondent, as found in this section of the country, and which were brought here by some of the early settlers from Bucks county, bear little or no resemblance to the pure Chittagongs. They are not so large, are very inferior layers, and unlike the species that "display as many colors as Joseph's coat," are most generally of a yellowish brown color. P.

Muncy, Pa., July 16th, 1853.

For the Farm Journal.

Gapes in Chickens.

MR. EDITOR:—

In your last number, a correspondent enquired for a remedy for *gapes in chickens*. I raised sixty or seventy last Summer, and about the same number this Summer, and have yet to loose the first one from that cause. I give them once a week, after they are four weeks old, a little cayenne pepper in

their food, and about once every two weeks a little flour of sulphur mixed with their meal, (this latter is good for other complaints than gapes,) and *let them have their water in shallow iron vessels*. They eat the pepper greedily, and it appears to act thus far as a sure preventive.

I first saw it more than a year since in the Farm Journal, and have tried it since then with the above results.

Yours truly,

B. S. R.

Towanda, July 1st, 1853.

For the Farm Journal.

Drilling Wheat.

MESSRS. EDITORS:

Having experienced great advantages on my own farm, from drilling wheat, over the broadcast sowing, and as the time for seeding is approaching, I drop you a line on the subject, and if it shall induce one or more farmers to try it, I shall feel that I have done the State some service. The difference in my field at harvest time, between the two methods, was obvious to the most careless observer, being one third heavier in product, the other circumstances being the same. The advantages of drilling I understand to be: 1st. The grain is sown and covered *regularly*, none left near the surface to be exposed and perish after the first settling rain. 2nd. It is covered *deeper* than with the common harrow, and is not so liable to be thrown out by the winter. 3rd. It takes a peck to half bushel at least less seed, which alone will pay for the cost of drilling. 4th. From its regular distribution by the drill, it comes up and *ripens* regularly and evenly, which is very often not the case, when sown broadcast. 5th. The open spaces between the drills afford a much better chance for the grass seed. In every view of the subject, my experience and hundreds of others proves it is true *economy* to have wheat drilled in. I once heard of a farmer who had a drill offered to him, to be paid for by the *increased* yield of a field of 50 acres of wheat, certain portions being left through the field broadcast, and the grower to determine the difference to his own satisfaction. This increase was afterwards calculated to be 153 bushels. The ground should be ploughed twice if possible, and put in nice order by the harrow and roller before the drill comes on the field. It is also important that none but a first-rate machine should be used.

Yours,

L. JOHNSON,
Del. Co., Pa.

Strawberries.

We had in preparation, some engravings of new varieties of fruits for the present number of Journal, but they have been unavoidably detained till too late. They will appear in our next.

For the Farm Journal.

In a former letter I concluded my remarks on the action of lime applied to the soil, and suggested the manner in which it should be applied. Without venturing the assertion, that I have pointed out all its functions in the soil, I should next in order, discuss its importance as a constituent of the plants that derive their sustenance partly from the soil.

I will, however be obliged to turn aside from the direct order and at present throw out some ideas on the subject of its manufacture or preparation.

Lime has been in use as a cement, from a very remote period. In Europe it is prepared by calcination, in kilns, heated, for the most part, with fuel, in many respects, analagous to wood. In the United States, until very lately, wood has been the only fuel employed in its manufacture. Of late years the scarcity of wood, and the increased facilities for obtaining coal, has given rise to the use of coal as a substitute. Kilns have been constructed in which coal alone is used; others interlard the limestone with coal, and use wood under the arch to start the fire. The lime manufactured by the use of coal alone, is not considered of as good a quality as the lime made from the same materials, in the heating of which even a portion of wood is employed, and neither of these will compare with the old-fashioned wood-burnt lime. There is no doubt that this difference really exists, and if wood could be used at as little expense as coal, no coal-burnt lime would be made. For the best kind of masonry coal-burnt lime is never used.

The objections to coal-burnt lime, are that it is not active, and does not display the same degree of vigor as the wood-burnt lime.

I am not aware that any one has attempted to explain why this is the case; and all those who have mentioned the subject have been contented to set it down without further inquiry.

When a question of this kind is presented to the mind for solution, the first enquiry should be: Wherein do the two processes differ!

The material in general use, in this country, for the manufacture of lime, is the Domolite. Domolite is a carbonate of lime and a carbonate of magnesia. It contains from 25-100 to 45-100 of carbonate of magnesia. The lime made from it is capable of forming the best and most durable cement. It is not so economical for agricultural purposes, because the proportion of carbonate of magnesia found in it, is not as valuable as a like amount of carbonate of lime. Magnesia may to a certain extent play the part of lime in the soil but it can never be said to be equal to it. The limestones which contain little or no magnesia are more apt to fall to pieces when heated, and are consequently more inconvenient to handle. Lime made from marble is always disintegrated.

Carbonate of lime is composed of Carbonic acid

and the oxyd calcium. At the ordinary temperature carbonic acid has a very great affinity for lime, so much so that it will deprive the carbonate of potassa of its carbonic acid. The affinities between substances is very much diversified by the temperature. Silix will not combine with lime at a low temperature, but will combine with it at high temperatures. Carbonic acid on the contrary will be expelled from its combination with lime by a high temperature, and is capable of great affinity for it at a low one.

I make no doubt that those who have burnt lime with wood, have attributed the whole effective power to the heat produced, and herein lies the difficulty of accounting for the difference of the results when coal is used as a substitute. With coal any heat can be obtained, however low or high, and (for this purpose) it contains no material in sufficient quantity, that could act injuriously.

Lehigh coal according to Mr. Vanuxen is

Carbon,	90.	1
Water,	6.	6
Silica,	1.	2
Alumina,	1.	1
Ox. Iron and Mang.	0.	2

Heat produced by anthracite coal, when used for the purpose in question has no power except that which is attributable to the heat. Heat is supposed to imbue the constituents of some bodies, perhaps all bodies with repulsion between their particles.

When heat is obtained by anthracite for the purpose of smelting the ores, care must always be had that the coal must be in sufficient excess over the supply of oxygen so that carbonic oxyd be formed, and not carbonic acid. In the case in question the presence of carbonic oxyd could not be of any benefit.

Lime when made in a confined vessel is no better than that made by anthracite coal. The reason is obvious. The same power is used in both cases.

Let us see what power is used when lime is burnt by the wood process. Heat produced by wood is accompanied by the elimination of a variety of gasses and vapors, compounds of Hydrogen and Carbon. Water is also produced and passes with the rest through the kiln and in actual contact with the carbonate of lime. Carbonic acid is easily reduced to carbonic oxyd at the ordinary temperature of a lime kiln.

The compounds of Hydrogen and Carbon containing as they do in a wood fire great excess of finely divided carbon, decompose the carbonic acid of the carbonate of lime, and we have a lime produced by elective affinity.

Experience has shown that lime thus produced is of a better quality than that which is produced by heat unaided by elective affinity.

Having ascertained the cause the next question is can we remedy this defect?

To be able to make as good lime with anthracite

as with wood, is impossible unless we resort to some means by which we can procure a reducing fire, calculated to reduce carbonic acid to carbonic oxyd.

If we could bring the carbon of the coal into immediate contact with the carbonate of lime, the desired effect would be produced. But carbon is not volatile when in its uncombined state and we are unable to effect any such contact. To pulverize the limestone and the coal and heat them together would do to a certain extent, but would be too expensive. The production of carbonic oxyd by its combustion will not do; carbonic oxyd cannot act as a reducer of carbonic acid.

If a gun barrel is filled with iron filings or bright card teeth and heated red hot, and a current of steam be passed through it, the steam will be decomposed and Hydrogen will escape at the other extremity, and the oxygen will unite with the iron.

If after we have completely converted all the iron in the gun barrel, into an oxyd of iron, we continue the heat and cause the same hydrogen to pass back through the tube, the oxygen of the iron, will reunite with the hydrogen, and water will be formed, and the metallic iron will be as before we commenced.

The same phenomena will take place in a lime kiln only in a different way. If when we have the anthracite fire incandescent, and the supply of air overbalanced by the coal, we pass steam through the fire, the steam will be decomposed, and carbonic oxyd will be formed, and hydrogen be eliminated. Further on this hydrogen will reduce the carbonic acid of the limestone, and water and carbonic oxyd will be produced.

The manipulation of such a process, of course at first would not be within the province of ordinary workmen, but would require skill to regulate the supply of steam and air.

A kiln for this purpose would need to be very much of the same construction of those for any expansive fire, and not such as would suit anthracite alone which has no expansion whatever.

G. BLIGHT BROWNE.

Gwyn edd.

Potato Disease.

We give below, extracted from the London Gardeners' Chronicle, an account of the new discovery by Professor Bollman, of the Russian Agricultural Institution, viz: that "thoroughly dried Potatoes will always produce a crop, free from disease." Whether the original cause of the rot was induced by unfavorable atmospheric agencies, or as asserted by others, to be the work of an insect, it is admitted by all, that diseased seed, will tend to perpetuate it, and the theory seems plausible that a high temperature will destroy the vitality of this diseased, organic matter. Much of the phenomena of vegetable life, bids defiance to the most minute scientific research,

all that we can often attain to, are *results*, without being able to understand the *process* by which they are brought about. It was remarked that the high dried potatoes, not only escaped disease, but pushed with unusual vigor. The Editor of the Chronicle supposes this to have been owing to the conversion of the insoluble starch of the potato by the heat, into gum, dextrine and sugar substances immediately soluble, and ready to be taken into the system. Mr. Bollman's theory, that the disease is expelled by a high temperature, is thus accounted for.

The account given by Professor BOLLMAN of the accident which led to this discovery is as follows: He had contrived a Potato-setter, which had the bad quality of destroying any sprouts that might be on the sets, and even of tearing away the rind. To harden the Potatoes, so us to protect them against this accident, he resolved to dry them. In the spring of 1850, he placed a lot in a very hot room; and at the end of three weeks they were dry enough to plant. The Potatoes came up well, and produced as good a crop as that of the neighboring farmers, with this difference only, that they had no disease, and the crop was therefore upon the whole, more abundant. Professor Bollman tells us that he regarded this as a mere accident; he, however, again dried his seed potatoes in 1851, and again his crop was abundant and free from disease, while everywhere on the surrounding land they were much affected. This was too remarkable a circumstance not to excite attention, and in 1852 a third trial took place. All Mr. Bollman's own stock of Potatoes being exhausted, he was obliged to purchase his seed, which bore unmistakable marks of having formed part of a crop that had been severely diseased; some, in fact, were quite rotten. After keeping them for about a month in a hot room, as before, he cut the largest Potatoes into quarters, and the smaller into halves, and left them to dry for another week. Accidentally the drying was carried so far that apprehensions were entertained of a very bad crop, if any. Contrary to expectation, however, the sets pushed promptly, and grew so fast that excellent young Potatoes were dug three weeks earlier than usual. Eventually nine times the quantity planted was produced, and, although the neighboring fields were attacked, no trace of disease could be found on either the herbage or the Potatoes themselves.

This singular result, obtained in three successive years, led to inquiry as to whether any similar cases were on record. In the course of the investigation two other facts were elicited. It was discovered that Mr. Losovsky (living in the government of Witebsk, in the district of Sebege,) had for four years adopted the plan of drying his seed Potatoes, and that during that time there had been no disease on his estate. It was again an accident which led to the practice of this gentleman: Five years ago, while his potatoes were digging, he put one in his pocket, and on returning home threw it on his stove (*poêle*) where it remained forgotten till the spring. Having then chanced to observe it, he had the curiosity to plant it, all dried up as it was, and obtained an abundant, healthy crop; since that time the practice of drying has been continued, and always with great success. Professor Bollman remarks that it is usual in Russia in many places, to smoke-dry Flax, Wheat and Rye; and in the west of Russia, experienced proprietors prefer for seed, Onions that have been kept over the winter in cottages without a chimney; such Onions

are called *dymka*, which may be interpreted smoke-dried.

The second fact is this:—Mr. Wasileffsky, a gentleman residing in the government of Mohileff, is in the habit of keeping Potatoes all the year round by storing them in the place where his ham are smoked. It happened, that in the spring of 1852, his seed Potatoes, kept in the usual manner were insufficient; and he made up the requisite quantity with some of those which had been for a month in the smoking place. These Potatoes produced a capital crop, very little diseased, while at the same time the crop from the sets which were not smoke-dried was extensively attacked by disease. Professor Bollman is of opinion that there would have been no disease at all if the sets had been better dried.

The temperature required to produce the desired result is not very clearly made out. Mr. Bullman's room in which his first Potatoes were dried was heated to about 72°, and much higher. By way of experiment he placed others in the chamber of the stove itself, where the thermometer stood at 136°, and more. He also ascertained that the vitality of the Potato is not affected, even if the rind is charred. To this, however, and some other points, we shall return next week. In the meanwhile those who have the use of a malt kiln, or even a lime kiln, might even now try the effect of excessive drying, for a month seems to be long enough for the process; and if Potatoes planted in the beginning of July will not yield much of a crop, it will at least be seen whether they are attacked by disease.

"If we admit the Potato disease to be analogous to the gangrene in animals, we must also recollect that it is of two sorts, the one dry and local, which is always the most dangerous—the other wet and dispersed through the whole structure. The germ of the last form of disease may also be assumed to have been contained in every set of Potatoes since the appearance of the epidemic. But this wet gangrene is changed by drying into the local gangrene, which, at a high temperature, wholly loses its contagious quality. And thus we obtain a sound crop, because the Potatoes which we plant are already cured."

"But the Potato disease may also be a putrid epidemic, readily communicated to the new crop, and then it may be compared to those contagious diseases to which men and animals are liable, and which act upon the organization by means of a putrid principle. Now, as all organic matter loses its vitality when exposed to a temperature sufficiently high, so it may be possible that high drying destroys the putrid principle, without affecting the vitality of the Potato itself. It appears that vaccine matter loses its power when exposed to a temperature of 172°, as was ascertained at Constantinople in 1846, by Dr. Rafalovitch; the virus of the plague has been observed to disappear in Egypt under similar circumstances. In another contagious affection peculiar to the human species, it has been demonstrated in the hospitals of St. Petersburg, by Dr. Rosenberger, that the contagious principle becomes weaker as temperature rises, and that the higher the temperature, the more rapidly it was destroyed. For instance, he found it was annihilated—

	Deg.	Deg.
In 10 hours, at a temperature of	128	—138
" 2 " " " "	135	—145
" 1 " " " "	146	—156
" ½ " " " "	156	—167

It, therefore, is not unreasonable to suppose that

the virus of the Potato disease may be destroyed by similar means.

In these interpretations of Professor Bollman's views we have been careful to separate what is said to be certain from what is avowedly conjectural, and we now leave the subject to the only tribunal by which it can be judged—that of general experience."

LADIES' DEPARTMENT.

WOMAN'S RIGHTS.

BY MRS. R. HYNNEMAN.

It is her right to bind with warmest ties,
The lordly spirit of aspiring man;
Making his home an earthly paradise,
Rich in all joys allotted to life's span,
Twining around each fiber of his heart,
With all the gentle influence of love's might,
Seeking no joy wherein he has no part—
This is undoubtedly—a woman's right!

It is her right to teach the infant mind,
Training it ever upward in its course,
To root out evil passions that would bind
The upward current of his reason's force;
To lead the erring spirit gently back,
When it has sunk in gloom of deepest night;
To point the shining path of virtue's track,
And urge him forward. This is woman's right.

It is her right to soothe the couch of pain;
There her true mission upon earth to prove,
To calm with gentle care the frenzied brain,
And keep her vigil there of holiest love;
To watch untiring by the lonely bed,
Through the bright day and in the solemn night,
Till health ensues, or the loved form is laid
To rest forever. This is woman's right.

So is a flower, that blossoms best unseen,
Sheltered within the precincts of her home;
There should no dark'ning storm cloud intervene,
There, the loud strife of worldlings never come.
Let her not scorn to act a woman's part,
Nor strive to cope with manhood in its might,
But lay this maxim closely to her heart—
That that which God ordains is surely right.

Domestic Receipts—Original and Selected.

Apple Sago.

One coffee cup of sago, one quart of boiling water poured upon it, season with milk, lemon and sugar. Pare and core as many apples as will stand in your dish,—pour the sago over them, and bake one hour. Serve with sugar and cream.

Minots Pudding.

A baker's loaf sliced, the crust taken off, the slices buttered, laid upon a flat dish, and a custard poured over, as much as the bread will absorb; let it stand half an hour, then fry it.

Bird's Nest Pudding.

Pare and core eight large apples, eight eggs, eight spoonsful of flour, one quart of milk; place the apples in the dish, and pour the batter over them, and bake one hour.

Indian Meal Short Cakes.

Stir into a pint of sweet milk, three well beaten eggs, add a little salt and a half cup of butter, with sifted indian meal to make a thick batter; drop it from a large spoon upon buttered tins. Bake them in a quick oven. When they are lightly browned they are done. Send them to the table hot, and eat with butter.

Pine Apple Jelly.

Pare and grate the Pine Apple, and put it into the preserving pan, with one pound of white sugar to every pound of fruit. Stir it and boil it until it is

well mixed, and thicken sufficiently, then strain it and pour it into the jars, and when it has become cool, cover the jellies with papers wet in brandy, cover the jars tightly, and treat them as apple jelly.

To Cook Parsnips.

Persons who have never eaten parsnips cooked according to the following mode, have no idea what an excellent dish they are. Scrape the parsnips, wash and slice them lengthwise; boil in just water enough to cover them when thoroughly done. Then put in a piece of butter, with a little salt and pepper. Beat up an egg with a spoonful of flour and pour over them—they are then ready to dish up.

Parsnips are likewise very good split once and roasted with pork in the dripping pan.—[Exchange.

Ruta Baga Pudding.

One and a half pints of pulped ruta bagas, two spoonfuls of wheat flour, four eggs, half a pint of milk, and one tablespoonful of butter. The pan greased and floured, and baked with a quick fire.—[Prairie Farmer.

Blackberry Wine.

MR. EDITOR.—It may not be known to many of your subscribers that they possess in the blackberry, grown so unwillingly by them in their fields, the means, at once, of making an excellent wine and a valuable medicine for home use. To make a wine equal in value to Port, take ripe blackberries or dewberries and press them, let the juice stand 36 hours to ferment, skim off whatever rises to the top, then, to every gallon of the juice, add a quart of water and three pounds of sugar, (brown sugar will do,) let this stand in open vessels for 24 hours, skim and strain it, then barrel it until March, when it should be carefully racked off and bottled.

Blackberry cordial is made by adding one pound of white sugar to three pounds of ripe blackberries, allowing them to stand for 12 hours, then pressing out the juice, straining it, adding one-third part of spirit, and putting a teaspoonful of finely powdered allspice in every quart of the cordial, it is at once fit for use.

This wine and cordial are very valuable medicines in the treatment of weakness of the stomach and bowels, and are especially valuable in the Summer complaints of children.

As this is the season of such disorders, and as the berry will soon be ripe, I have thought it necessary to make known these receipts.—[Southern Planter.

Yours, &c.,

ECONOMIST.

Farm Work for the Month.

Weeds now require especial attention. The cultivator and hoe, with the briar scythe should be plied continually, around the fences, and among the corn and potatoes, till they are all extirpated. They should then be gathered and composted into a heap, with ashes and some soil, and after being turned over a few times, and well incorporated, will be a valuable addition next Spring to the manure heap.

Late potatoes should be kept well cultivated, which obviates to some extent the effect of dry weather. Ground for wheat should be ploughed as soon as oats is gathered, and allowed to lay till towards seeding time, when Guano or manure should be spread and

ploughed in. Twice ploughing, and the consequent fine pulverization, greatly facilitates the germination of grass seed, and enables the drilling to be much better done. The advantages of drilling over broadcast sowing have been so fully tested, that it is presumed no good farmer will continue the latter, if a drill can be obtained. Those who want to purchase are referred to advertisements on cover. Much of time after harvest and before seeding, is occupied with hauling out manure. This should be spread evenly, and ploughed in as soon afterwards as possible. Much of the manure now taken on, may be compared to the dregs of tea, after repeated infusions to obtain all its strength. The usual practice of letting it lay exposed in yards all Summer, open to sun and rains, will have dissipated the best and largest portion of its virtue. What little is left, had better be saved by ploughing in at once. Turnips should now be sown, on ground vacant from early potatoes, or other removed crops. Drilling in rows will admit of easier cultivation and management.

Feeding cattle and cows suffer considerably this month in their condition, from the dry weather and torment from flies. Where they have access to shade and water, to stand in and cool themselves, they abandon the open fields during the heat of the day. This matter of shade trees for stock, is too much lost sight of by farmers. It is as grateful to them in hot weather as us, and considerably promotes their thrift and comfort. Milch cows now generally fall off in their milk, and should have a portion of sown cornfodder occasionally. Have a lump of rock salt convenient of accession in each field.

Ditches and drains should now be opened and cleaned out, and the stuff hauled to the compost heap to mix with the weeds.

Cradle and grass scythes should be oiled, and with other harvesting tools, collected and laid away for another season in a dry place.

Those who enjoy a fire of dry hickory wood in the Winter season, should remember this is the best month for cutting it. It will now season perfectly and not become worm eaten. The same rule applies to oak and chesnut, for fencing purposes, which have been very fully proven, to last much longer.

VEGETABLE GARDEN.—Keep the ground well stirred and weeds destroyed. Peas may be sown for Fall crop. Carry off pea haulm and refuse stuff to the compost heap. Cut and gather such herbs as are in flower, and lay them in a dry and shady place. Take up onions and onion sets, and prepare ground for other crops. They should be dried and hardened by exposure to the sun, before laying away. Gather seeds as they ripen.

In latter part of month cabbage and lettuce may be sown for cold frames. Also, onion seed to stand the Winter. Turnips and spinach radishes may be sown now. Earth up celery as its growth requires. Transplant endive.

FRUIT ORCHARD.—Pears, cherries, apples, plums, may be budded this month, whenever the sap flows freely, and the bark will separate. Buds for insertion should be well ripened. Strawberry beds may be planted out, advantage being taken of a damp time. Finish Summer pruning of fruit trees and vines. Apply wash before recommended, to trunks of trees, if not previously done. Thin out fruit, where trees are overloaded. Cut out all blighted limbs.

FLOWER GARDEN.—Tie up dahlias to stakes, and attend to general directions of last month.

Pennsylvania Horticultural Society.

The stated meeting of this Society was held on Thursday evening, July 19th, in the Chinese Saloon, Philadelphia, Gen. Patterson, President, in the chair. The exhibition of plants was unexpectedly large for mid-summer; each collection contained some possessing interest, which it might be well to notice. Among those brought by the President's gardener, was a fine large plant of *Plumeria rosea*, which the General sent home from Mexico, and has now flowered for the first time. *Tabernaemontana coronaria* in fine flower. *Columnia schiediana*, and a number of air plants. Among Robt. Buist's were new plants, and shown on this occasion for the first time. *Cyrtanthus magnificus*, *Lycaste tetragona*, *Achemines Margaretta*, *Fuchias Orion*, Gem of the season; *Alpha* and *resplendens*, and *Gloxinia Victoria Regina*. F. Lennig's gardener, exhibited two very fine plants—*Gardneria Stanlyana*, in full flower, and *Plumeria rosea*. Caleb Cope's had three new species, exhibited for the first time—*Justicia bicolor*, *Promenaea stapeloides*—an orchid, and Hovey's *globe amarantus*, a fine specimen of *Clerodendron Keempperii*, *Alamanda neriifolia*, &c. W. W. Keen's contained a new plant, *Hoya campanulata*, very pretty, and seen for the first time—*Lophospermum Hendersonii*, *Fuchsias*, &c. James Dundas' gardener presented handsome *Fuchsias*, *Gloxinias*, and a most beautiful air plant the *Cattleya Mossia*. The fruit table was laden with tempting specimens of peaches, very large—called Late Admirable—a seedling tree in fruit, growing in a 14 inch pot, also grapes of varieties, Black Hamburg, St. Peters, White Frontignac, Tokey and Purple Damask, from Mr. Cope's grounds. From Eden Hall were Black Hamburg and White Muscat Grapes. Very large and luscious Moorpark Apricots, by Thos. Robbins. Wm. V. Pettit, Wm. Johns and H. Pratt McKean, large fine gooseberries, called Cook's White Eagle, Farrow's Roaring Lion. Isaac B. Baxter had seedling Apricots, Plums, the Royal Hative and Jefferson; and 3 kinds of gooseberries. Mr. Buist, Breda Apricot. Pears—Bloodgood, Windsor, Madeline, English and French Jargonelle, Currants, Black Naples and late black kinds. A. Parker's seedling Apricots. H. W. S. Cleaveland, St. Michael Figs, a choice dark variety. Wm. Johns, green Figs, and John Perkins, seven varieties of apples.

Mr. Cope's gardener exhibited a table of fine esculents.

Premiums awarded were by the Committee on Plants and Flowers. *Plants in Pots*—For the best twelve to Thos. Fairley, foreman to Robert Buist; for the second best to Thos. Meehan, gardener to C. Cope; for the third best to Wm. Grassie, gardener to W. W. Keen. *Plant in a Pot*—For the best specimen, *Gardneria Stanlyana*, to John Pollock, gardener to F. Lennig. *Indigenous Plants*—For the best to Alex. Parker. Plants shown for the first time—A premium of \$3 for *Hoya Campanula*, to Wm. Grassie, gardener to W. W. Keen, one of a dollar for *Justicia bicolor* and *Gomphrena Hoveyii*, to Thos. Meehan, gardener to C. Cope, and one dollar to Thos. Fairley, foreman to R. Buist; for a collection of Achemines, *Gloxinias* and a *Cyrtanthus*. *Boquet Design*—For the best to Isaac Collins, gardener to Gen. Patterson. *Basket*—For the best to Thos. Meehan; for the best of indigenous flowers to the same.

Special Premiums—Two dollars to James Bisset, gardener to Jas. Dundas, for *Cattleya Mossia*, a fine specimen; and three dollars to Isaac Collins, gardener to Gen. Patterson, for a large collection of plants, including a beautiful specimen of *Plumeria rosea*, *Orchids*, and other green and hot-house plants.

By the Fruit Committee—*Grapes*—For the best black variety, Black Hamburg, to Thos. Meehan, gardener to C. Cope; for the second best to A. J. Smith, gardener at Eden Hall. For the best of a white variety—White Frontignac to A. J. Smith; for the second best, Golden Chasselas, to Thos. Meehan. *Apricots*—For the best to Thos. Robbins, for Moorpark; for the second best to Wm. V. Pettit, for same kind. *Plums*—For the best, the Imperial Gage, to Isaac B. Baxter; for the second best, Mirabelle, to A. Parker. *Figs*—For the best to H. W. S. Cleaveland, for St. Michaels; for the second best to Wm. Johns. *Gooseberries*—For the best to A. Burnett, gardener to H. Pratt McKean, for Roaring Lion; for the second best, the large green, to Isaac B. Baxter. *Apples*—For the best, the Early Harvest, and for the second best, the Bough, to John Perkins; and special premiums of three dollars for very fine Peaches, and two dollars for a seedling peach tree in fruit, in a pot, to Thos. Meehan.

By the Committee on Vegetables—*Tomatoes*—For the best half peck to James Jones; for the second best to Wm. Johns. For the best display of Vegetables, by a private gardener, to Thos. Meehan, gardener to C. Cope.

THOS. P. JAMES,
REC. SEC.

Pennsylvania State Agricultural Society,

REGULATIONS FOR 1853.

ARRANGEMENTS FOR THE FAIR.—All the members of the Society, whose dues are paid, and all who shall become members previous to, or at the Fair, will be furnished with badges or cards of membership, which will admit the person and the ladies of his family, and children under the age of eighteen years of age, to the Exhibition, at all times after the grounds are thrown open, during the continuance of the Fair. Badges to be had at the Treasurer's office, on the grounds, on Tuesday morning. Single tickets 25 cents, admitting one person, will be ready on Thursday morning, at the Treasurer's office, at the Fair grounds.

Members will be allowed to enter the grounds in carriages, with their families; but no hacks or other public conveyances will be permitted to enter.

Members of the Society, and the Viewing Committees and Judges, alone, will be admitted the first day of the Exhibition.

SPECIAL ATTENTION IS DESIRED FROM EXHIBITORS. The days selected for the Fair are *Tuesday, Wednesday, Thursday and Friday*, the 27th, 28th, 29th and 30th days of September.

Exhibitors, must become members of the Society, and have their articles and animals entered on the Secretary's books, on or before *Tuesday evening*, the 27th; and all articles and animals, except horses, must be brought within the enclosure, as early as *Tuesday noon*, in order that they may be suitably arranged for examination by the Judges on Wednesday morning. Horses will be received early on Wednesday morning, but must be entered previously.

The Executive Committee do not intend to assure any exhibitor, who neglects these requirements, that his articles can be passed upon by the Judges. While every effort will be made to secure the examination and proper notice of every article on exhibition, justice to those who comply with the rules of the Society, requires that they shall, in all cases, first receive attention.

Persons are desired to forward to the Secretary, at Pittsburgh, previous to the 20th of September, their entries of what they intend to exhibit.

An office will be opened at Pittsburgh, about two weeks previous to the Fair, for the purpose of receiving entries.

Articles or animals removed from the ground before the close of the Exhibition, (except by permission of the President,) cannot receive a premium, though awarded.

MEMBERS of the Society will be admitted to the grounds on Wednesday.

On Thursday the grounds will be opened to the public, and continue open for two days. Single admission 25 cents. Members' tickets \$1.

COMPETITION WITHOUT THE STATE.—The Pennsylvania State Agricultural Society makes the field of competition co-extensive with the United States, and cordially invites the citizens of other States to compete with us for our prizes.

Animals and articles entered for exhibition will have cards attached, with the number as entered at the Business Office; and it is desired that exhibitors should, in all cases, obtain their cards of number and class, previous to placing their stock or articles on the grounds.

All persons who intend to exhibit Horses, Cattle, Sheep or Swine, or who intend to offer stock for sale, should notify the Secretary of such intention, on or before the 26th day of September, and leave with him a list and full description of such stock, in order that proper arrangements may be made for their accommodation.

Applicants for premiums are particularly requested to pay attention to the directions attached to the list of premiums for *fat cattle, fat sheep, butter and cheese, &c.*; and the statements required from exhibitors of those articles must be lodged with the Secretary before the 26th of September.

INSTRUCTIONS FOR THE JUDGES AND FOR THE SUPERINTENDENTS OF THE DIFFERENT DEPARTMENTS.—The Judges are requested to report themselves to the President on their arrival, at the Business Office, at the Show grounds; they are desired to meet at the Society's tent, on the grounds, at 4 o'clock, P. M., on Tuesday, 27th September, when the vacancies will be filled; and on *Wednesday morning, at 9 o'clock*, at the same place, they will be furnished with the Books of Entries, and proceed to decide upon the merits of the different animals and articles submitted to them, reference being made to the numbers affixed to each.

The Judges on all animals will have regard to the symmetry, early maturity, size and general qualities characteristic of the breeds which they judge. They will make due allowance for age, feeding, and other circumstances, on the character and condition of the animals.

They will not give encouragement for over-fed animals. They will not award premiums for Bulls, Cows or Heifers, which appear to have been fattened for the butcher; the object being to have superior animals of this kind for breeding.

No person whatever will be allowed to interfere with the Judges during their adjudications.

The Judges will be expected, in all cases, in making their reports, to give the reasons of their decision, (especially in the case of animals,) embracing the valuable and desirable qualities of the animals or articles for which premiums are awarded.

When anything is exhibited to the Judges, which they shall deem meritorious, but beyond their pow-

er to award a premium to, they will furnish a note of the same to the Committee on Discretionary Premiums, for their consideration and action.

No animal or article can take more than one premium. All production placed in competition for premiums, must be the growth of the competitors.

When there is but one exhibitor, although he may show several animals in a class or sub-division of a class, only one premium will be awarded; that to be the first, or otherwise, as the merit of the animal or article may be adjudged. And a premium will not be awarded, when the animal or article is not worthy, though there be no competition.

SUPERINTENDENTS.—It is expected that the Superintendents will take particular direction of all articles in their respective departments, and see that all such articles are arranged, as near as may be, in numerical order, for their easy approach and examination.

PLOWING MATCH.—The Plowing Match will take place on Friday, the 30th, at 9 o'clock, A. M., in a field adjacent to the place of Exhibition.

Persons competing in the Plowing Match are requested to have their teams hitched, and ready to move off at the appointed hour.

THE ADDRESS.—The Annual Address will be delivered at 1 o'clock, P. M., on Friday, the 30th of September; and immediately after the Address, the Reports of the Viewing Committees, or Judges, will be read, and the Premiums awarded and distributed.

HAY AND STRAW.—Hay and Straw will be furnished gratis, for all animals entered for premiums; and grain will be provided, at lowest cost price, for those who desire to purchase.

PAYMENT OF PREMIUMS. The Premiums awarded will be paid by the Treasurer, at his office on the grounds, till the close of the day, and on Saturday, at the same place.

All Cash Premiums will be then paid and delivered, if called for.

Persons to whom Premiums may be awarded, are informed that unless they call for their Premiums at the Fair, application must be made, by letter, to the Treasurer, George H. Bucher, at Hogestown, Cumberland County, with whom the Book of Awards will be left.

The Secretary will forward the Diplomas awarded, in such manner as may be directed by the persons entitled to receive them.

The Reports of the Judges will be published by the Society, in pamphlet form, and distributed, as soon after the Fair as practicable.

NOTICE TO EXHIBITORS.—The Executive Committee will take every precaution in their power for the safe preservation of Stock and articles on exhibition, after their arrival and arrangement upon the grounds; but will not be responsible for any loss or damage that may occur. They desire exhibitors to give personal attention to their articles, and at the close of the Fair to attend to their removal; and when the Fair is announced as closed, on Friday, after the address, exhibitors or their agents will be required to take charge of their articles, as the Society cannot take further care of them.

RECEPTION OF STOCK AND ARTICLES AT PITTSBURGH.—Mr. OLIVER P. SMIRAS will give attention to all articles for Exhibition, directed to his care, and have them conveyed from the Cities of Pittsburgh and Allegheny, to and from the Fair ground, free of expense to the exhibitor.

PENNSYLVANIA FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

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Drying Vegetables for Farm Use.

A friend says to us, that he has two or three hundred bushels of potatoes—that he has not hogs enough to eat them, and the distance that he lives from market will not allow of any profit, but a loss at the present prices, should he haul them there; and he asks what he shall do with them? Well, rather than have them rot, he had better give notice that he will give them away; to those who will come after them. After suffering the scourge of the potato rot so many years, and living *potatoless*, as many have, it is really refreshing to hear somebody complain, that he has more potatoes than he can use. It seems like old times, when, whatever might happen to other crops, we were sure of potatoes enough. The question, however, reminded us of a plan, which might be generally adopted by farmers, for the preservation of potatoes, turnips, apples, and such like perishable articles.

It is drying them. By going to a little expense for fixtures, the labor and trouble would not be much.

We all know that our good housewives dry apples, pumpkins, huckleberries, &c., for domestic use. Well, suppose you adopt the same course for preservation of potatoes, turnips, apples, &c., for farm purposes? All that is absolutely necessary to do, to effect this, is to make clean, slice them, and expose them to artificial heat, in a kiln, or some close room, until the water is evaporated.

For domestic uses, we pare apples previous to drying, but for feeding stock, nothing more need be done than slicing them up. So of potatoes or turnips.

The plan of drying potatoes, may be new to some, but it is a thing that is done in some places, to a considerable profit, for navy and domestic uses. Dried potato is getting to be quite a valuable article. Some enterprising Vermonters at Hinesburg, have started a potato drying establishment, and we understand, are doing a good business.

The Burlington, (Vt.) Free Press, in an article on this subject says:

"The application of this method to potatoes at the Hinesburg factory is substantially as follows:—Being thoroughly cleansed, deprived of the skins and properly prepared, fresh currants of air are moved in contact with the potato pulp by machinery. The air rapidly takes up and carries off the moisture. The material is made to take the shape of tubes, (macaroni fashion,) and when perfectly dry, is broken in a proper mill into the form of what is called "samp" or "hominy." Indeed it might be easily mistaken for that article made from our common yellow Indian corn. By the same process it has lost nothing but *water*. But by that loss it is made to occupy but *one-sixth* of its original bulk, and what before weighed *four pounds*, now weighs but *one pound*. In that condition it can be packed in tight casks or in tin canisters, and be transported just as easily as so much dry rice. Years of trial have proven the unchanging character of the preparation.

Now then for the use. For one pound of it take three pounds of boiling water, or (to speak cookery book fashion) put one tea-spoonful of it into about four tea-spoonfuls of boiling hot water. In ten minutes the water is entirely absorbed, and the result is a *well cooked dish of mashed potato*, ready to be salted and buttered, or dealt with as a like dish made from fresh potatoes might be. The taste differs but slightly from that of fresh potato prepared in the same manner. We speak advisedly, for we have tried. Though we think any one would prefer to crush for himself a fresh mealy potato, if he were in a con-

dition to choose, we have often, within the last five years, had to be content with using potatoes tasting not a whit better than the article we are speaking of—hardly as good even.

It is difficult to comprehend at once the great importance of such a preparation of the potato. To a very large portion of the human family the potato is an article of prime necessity for daily food. All who have been accustomed to use it, feel the deprivation severely if placed beyond its reach for any considerable time. Yet the bulkiness and perishable nature of the tuber in its natural condition, make its transportation for great distances by either land or sea an impossibility. For the want of it, the health of crews on long voyages, and of soldiers or other persons occupied away from where it can be procured, is often greatly injured. In some districts too, where it is relied upon as the chief article of food, great distress is caused by the failure of a crop, because the want can not be supplied except at an insupportable expense. Let the preparation of this "im perishable potato" be made common, and all these evils are substantially done away with. Government ships, whaling vessels, merchant's ships, will all make it a regular part of their stores. It will not occupy near the room of ship biscuit, and can be kept in store with less risk of spoiling. We are informed that European vessels already make it regularly a part of their stores, when going on voyages across the tropics, and that the discovery ships under the charge of Dr. Kane are supplied with it. Travellers across the continent, and inhabitants of those parts of our own country where the vegetable can not be raised successfully, find the prepared article a most convenient one for use.

Few persons have any conception of the amount of nutritive food which can be raised in the form of potatoes, where the soil and climate are favorable. Though pound for pound, less nutritious than wheat or rye, as a whole, no other crop can equal it. Careful experiments have shown that from the same amount of suitable ground, where there could be raised, on the average, 3,400 lbs. of wheat, or 5,200 lbs. of peas, there could be raised 38,000 lbs. potatoes; or, reducing them all to the *absolutely dry* state, for 3,036 lbs. of wheat, or 2,080 lbs. of peas, there would be 9,500 lbs. of potato—more than three times the amount of food produced in the shape of wheat, and more than four times that in the form of peas. We quote this statement from Chemical Technology of Dr. Knapp, of Giessen—a recent work of very great authority. The practical results of some experimentalists, on the feeding of cattle with these different articles, place the relative value of the potato at a higher mark still."—[Maine Farmer.]

Chemistry of Horticulture.

BY J. S. HOUGHTON, M. D., PHILADELPHIA.

COMPOSTING SOILS.—Gardeners generally prepare their soils, so far as my observation has extended, in a very practical way, with little or no attention to the chemical principles involved in the operation. They have learned, by long experience, that a partially rotted sod makes the best general soil that can be obtained. Farmers know that a clover sod plowed under makes good manuring for corn; but farmers seldom, if ever, make a compost of sods for their gardens or manure heaps. Gardeners are clearly ahead of farmers in their method of cultivation and fertilization, but they are by no means up to the standard of modern science in their preparation and management of soils.

How to rot or decompose a heap of sods, has long been the study of gardeners. Some let it lie in a heap, with occasional turnings and choppings, for two or three years. Others, finding that the use of lime and the access of air hastened decay, put up the heap with lime, and used sticks or pieces of timber to separate the mass and admit the air. Others tried the addition of heating dung and water.

Now all these methods are slow and imperfect. That they are slow and tedious, all who have tried them well know; that they are imperfect, I will endeavor to prove.

It is well known that plants can receive nutriment only in the form of a *fluid* or a *gas*. No solid particles of matter, of any description, can enter the circulation of plants. Hence, every thing intended for their use must be capable of being dissolved in water, or of being converted into a gas, when needed. Now, if a sod, though rich in fertilizing materials, be not completely rotted or decomposed, or in a state to become fully rotted and decomposed, it follows that its constituents can not possibly become immediately useful. Clover contains many valuable fertilizing ingredients; but until these ingredients become changed from the form of clover into their chemical elements, (lime, potash, soda, &c.,) they can not be appropriated by plants. Again, even if the clover be decomposed, and the chemical elements remain in such relations that they are *insoluble* in water, or not capable of readily becoming *gases*, they can not be made *available* in the garden. Of course it will be seen at once that under such circumstances a gardener may have a heap of rich material, and yet, if it is not available, it is no better for present use than a poor heap.

The imperfection of the process commonly adopted in composting garden soils consists in several points. First, where all the soil is *fresh*, there is no well decomposed matter of a carbonaceous character to act as an *absorbent* of the gasses generated by the act of decomposition, and hence much valuable material (ammonia) is lost. In all such compost heaps a quantity of well decomposed turf or black, garden soil should be mixed with the new soil, to catch the ammonia produced by the decay of the new soil or sod. Again, much valuable time and labor is lost by the slow decay of sod where no chemical agent is employed to assist the decomposition. Lime is an objectionable agent, because, when freely used, it *locks up* nearly as much fertilizing material as it liberates. Stable manure, in a state of rapid decay, or high heat, is not so objectionable as lime; but this is not the best material for this purpose. Water in moderate quantities is highly important; but with this should be used *potash*—the common potash of the shops—which decomposes all vegetable matter rapidly and powerfully, and does not lock it up in new combinations as lime does, but on the contrary sets free even those combinations which lime renders insoluble.

With solutions of potash in water, any heap of sod or other vegetable matter may be decomposed as rapidly as the operator may desire, and all the constituents of the heap will be placed in a state easily soluble in water, or ready to become gases, on the slightest action of water and vegetable life. Indeed, the ingredients of plants are by potash converted in great measure into gases; and if there be present vegetable charcoal, (black loam,) or animal charcoal, (bone black,) or clay, these gasses will be caught up and retained till taken up by other plants. No organized vegetable body can resist the action of potash; it must decay, and resolve itself into its origi-

nal elements at its touch. In fact, it is not necessary that the potash should *touch* the substance of the vegetable; it acts by its mere *presence* in a near part of the heap, *disposing* not only that matter which it touches, but all other matter in contact with that which it affects to decay. "Rot makes rot," is an old adage; and so it is in an especial manner with the rot caused by potash.

All who undertake the cultivation of the earth, either in the field or the garden, should bear in mind these important principles. You may have rich fields, but their riches may not be available to plants. Ashes or potash may be highly important to bring your peat, turf, meadow mud, raw coarse manure, sod heaps, &c., into sufficient action. Lime is useful in small quantities, and so is salt; but I consider large quantities of lime dangerous for many reasons beside that mentioned above. Potash is worth its cost as a manure independent of its power as a decomposing agent, and in garden work it is indispensable. Applied in solution, in free quantities of water, it will bring a sod heap in to a better state in sixty days than two years of rotting and turning will effect by the old methods without it.—[Horticulturist.

Plain Facts in Agricultural Chemistry.

BY J. S. HOUGHTON, M. D.

Common stable, from which the urine of animals has escaped, is not a complete manure.

The above assertion was presented in a previous article, and explained at some length. The chief reason is simply this, that certain parts of the food consumed by animals always go off in solution in the urine, and hence the solid manure alone, no matter how much you may have of it, can never furnish the material to grow the same crops upon which the animals were fed, if the urine is lost.

In intimate relation to this great fact, in the economy of manures, is this other fact, a principle, that every soil must contain *all* the constituents of the plant to be grown, in sufficient abundance, (and even in excess,) or the most perfect and largest crops cannot be produced.

One of the chief ingredients of plants, as lime, or plaster of Paris, or salt, or potash, alone, will not, in ordinary cases, be a sufficient addition to the compost heap; but if the plant requires, as most plants do, five or six leading ingredients, they must be all there or those which are employed will be, for the time, comparatively lost.

A very good illustration of this point has been used by Dana. He says that attempting to work the soil without *all* the ingredients of plants present in sufficient abundance is like a man attempting to build a vessel, thus: he may have all the planks, and ship knees, and spars, and sails, and rigging, all other requisite materials, but *no nails and spikes*, and he can't possibly build his ship successfully. Nails and spikes are small matters, compared with the rest of the vessel, but he can't get along without them.

So it is in farming. You may as well try to build a ship without nails, as to grow the plants with the smallest ingredients in the fertilizing materials required by plants omitted. If you have one favorite manuring agent, say lime, it may be the very thing your plants don't want, while the little thing they do want is neglected. Potatoes need plenty of fresh loam, and little rich manure; corn needs much rich manure. Yet how often do we see farmers planting their potatoes with first rate manure, and planting corn on a freshly turned sod, with scarcely any manure at all. The new sod, I grant, would make good

manure if it was rotted, but it is doubtful whether its ingredients will become available to the corn the first season.

With the free use of stable manure it is probable that nearly all the constituents of plants may be present in the manure heap and the soil with the exception of ammonia. This may readily be supplied by guano, when thought necessary. The guano should, of course, be composted for a week or two, before mixing with the manure heap, with a good black loam, charcoal dust, or some other good absorbent of ammonia, say Plaster of Paris. But still, in general culture, some leading constituent of a special crop may be deficient. For potatoes, potash is wanted, in large quantity; for turnips, bone dust; for peas, lime; for clover, plaster of Paris. Now, if a farmer neglects to ascertain whether or not, all the ingredients of a crop are present in sufficient quantity, in the manure he intends to use, may he not, instead of missing the small matter, (like the nails of the ship,) miss the leading material, some thing analogous to the wants of the soils which are the most important of all.

No man, it seems to me, can deny for a moment the necessity of looking carefully into the nature of plants, and the composition of manures, if he desires to practice farming with success. I am by no means in favor of recommending to farmers to obtain analyses of their soils, because I do not think, as a general thing, they can make any profitable use of them. They may learn the necessity of saving their liquid manure, and the necessity and the art of supplying deficient materials in their compost heaps.

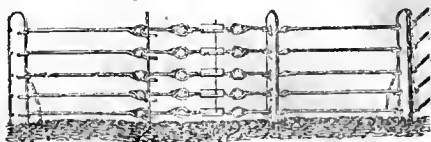
I will endeavor to do what I can towards this desirable end, by furnishing a few more plain facts in agricultural chemistry from time to time for circulation in the Agriculturist.—[New York Agriculturist.

Philadelphia, May, 1853.

Walker's Patent Iron Fence.

The growing scarcity of timber, suitable for fencing purposes, and the consequent high price, are subjects well calculated to challenge the attention of the farmer. Already, the cost of fencing is an onerous tax, and with every day the tax is increasing. The question, therefore, naturally arises, how is this growing evil to be remedied? Three modes suggest themselves: one, by substituting the *soiling* of cattle, for the now almost universal practice of pasturing, the other by the use of iron instead of wood, for fencing, or hedges.

It is not our intention at this time, to discuss the merits or demerits of soiling cattle, or hedging, reserving it for a future article, intending merely to commend to the attention of our readers, the use of the wire fencing; believing that in point of economy, as well as appearance, it is decidedly preferable to the wood.



Above we give an illustration of Walker's Patent Iron Fence, which possesses many advantages, which

are briefly set forth in the follow description:

The above fence differs from all other iron fences now in use. Although virtually a sectional fence, and susceptible of being readily taken down, in whole or in part, it is nevertheless a continuous connection; the rails connecting with each other by means of the hook and eye, at the end of each rail, the posts being used to bear up the rails at each connection. The hook end of the rail occupying the perpendicular slot or mortice, in the post, and just large enough to allow the hook to pass through.

Cast Iron Sockets, of a peculiar form, for receiving the posts, will be furnished if desired; these are readily driven in the ground, thus saving the expense of digging post-holes, and greatly facilitates the putting up of the fence. These are a part of the patent, as also the single iron for corner post; which may be used for straining posts.

Manufactured by M. Walker and Sons, Philadelphia, and for sale at the Factory, or at P. Morris & Co., 380 Market street, Philadelphia.

PRICES:

Made of one-fourth inch rods, \$1 50 per rod, 16 feet.

“ five-sixth “ \$2 00 “ “

“ three-eighths “ and heavier in proportion

Iron corner posts, properly prepared, and having iron brace sufficiently heavy for one-fourth inch fence, \$1 50. For five-sixth inch fence, \$2 00.

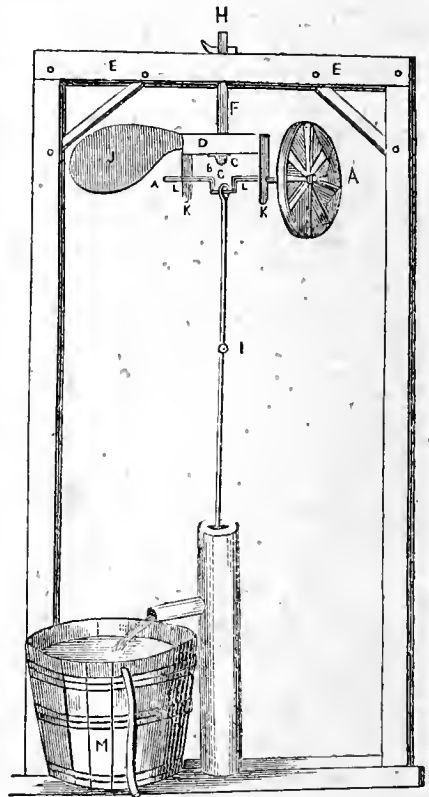
New Tanning Process.

We see by the London Mechanic's Magazine that a patent process, named “Prellers,” has lately found much favor in London. After the hides and skins are unhaired in the usual manner, they undergo a partial drying, and receive a uniform coating of a peculiar paste composed of various vegetable and saline substances. The vegetable substances employed contain large portions of starch, such as barley, rice or wheat flour, a little gluten, some butter, or oil and grease, some common salt, and some saltpeter. The hides are laid upon tables and smeared on the fleshy side, with the said paste, and in that state are put into the interior of large drums, which receive a rotary motion, and by which the hides are greatly agitated, and the paste (by pegs in the inside of the drums,) is forced into the pores of the hides or skins, or rather they are kneaded along with the paste for two or three hours, after which they are drawn out. They are then found to be in a partial dry state, then hung up and aired for two hours, and again laid upon the table, where they receive another dose of the same paste, and are again returned to the drums a second time, when the same operation as that described is again performed. After this they receive a third smearing with the paste, and are kneaded in the drums, after which they are taken out and hung up to dry, and are then fit for the currying process. The leather thus produced is stated to be much lighter than that produced by oak or other tan barks, but it is much stronger and will wear much better. It is asserted that for machinery bands it is twice as strong as oak tanned leather, and that sheep and goat skins are rendered very tough and durable. It is said that calf skins are tanned by this process in about three hours, and the thickest ox-hide in three days.

Application of Wind as a Power for Raising Water.

To pump from a well the requisite supplies of water, was a work of no small labor. It led to the investigation of a method of working a pump by means of the wind. The practicability of the plan I am about to suggest, does not remain to be tested by experiment. During former years, a small windmill was in successful operation upon the farm of Mr. Anderson, five miles west of Ashland, Ohio, on the road leading to Mansfield. It worked a pump that amply furnished a large stock of cattle, which otherwise could obtain no water. Two days only did it cease to perform its duties during more than two years, and that interruption was occasioned by the meddling of mischievous boys. It is *sera-till* in operation, for aught I know.

The cost of this simple machine, including pump, did not exceed \$15.



By reference to Plate, the principles upon which it was constructed, will be at once comprehended. The direct application of the power, without the intervention of any gearing or machinery, obviates much friction, hence a small amount only of power is required. The diameter of the wheel should not exceed four feet, a few inches is preferable. It is firmly fixed by its hub on an iron axle, formed of a square inch bar. The sails or buckets are secured at their outer ends to a wooden rim, like that of a large spinning-wheel. An inch and a half crank is raised on the axle at B, which, at that point, is cylindrical, and upon which is adjusted the upper ends of the piston rod of the pump C. This, when in motion, of course commands a play of three inches.

THE BODY OF THE MILL.—A piece of pine plank, D, is suspended from the cross girt of a frame E, by

an iron bolt, F, furnished at its lower end with a large head, G, and a washer, and secured by a key, H, at the upper end, admitting of an easy circular motion of D around the bolt. This motion is coincident with that of a swivel on the piston rod, I. The rudder, or vane, will necessarily throw the wheel at all times into the wind. The axle A, is suspended from the body by two straps of iron, through which it passes to L, L, where it is cylindrical without regard to perspective and proportion, but will, perhaps, illustrate the subject sufficiently.

A breeze which merely agitates the leaves of the trees will set the machinery in operation. A reservoir of some six or eight hogsheads was kept nearly filled, and when, in windy weather, a surplus of water was raised, it was returned to the well by a waste-pipe, M. In the hands of an ingenious mechanic, it might, no doubt, be greatly improved. Iron, in some of its parts, might be substituted for wood.

A well, suitably located, will furnish water for an ordinary garden, and without labor, by the aid of this mill. How much it would improve our flowers, fruits and esculent vegetables, cannot be estimated, but would surely effect a revolution in our present modes of gardening here in the West, where we suffer much every season from drought. Public tanks, inns, tanneries, and thousands of prairie farms require its aid. Some active firm would render the community essential service if they would manufacture a supply of these mills and adapt them to some of their improved pumps.

In all this, gentle reader, there is no Quixotism. Its feasibility has been amply tested.

J. P. KIRTLAND.

Cleveland, Ohio.

In connection with the above, we copy the following appropriate remarks from the *Genessee Farmer*. There are farms all over New England where their proprietors have been pumping water by hand for large stocks of cattle for a hundred years, when the expenditure of a few dollars in some such contrivance as we have given above, would have furnished an ample supply.

AGRICULTURAL MECHANICS.

Mechanical science and arts are doing more for the advancement of agriculture in the United States, than all other agencies combined, so far as immediate results are attained. Ultimately, chemistry, physiology, meteorology, geology, and other departments of the natural sciences, will confer benefits on all industrial pursuits far transcending any mere mechanical advantages. Indeed, the most valuable mechanical powers, even now, are more the fruits of an intellectual culture than of original genius; and the successful study of natural phenomena precedes nearly all important inventions and discoveries. Operations that have been practised thousands of years, like those of ploughing, weaving, grinding grain, and pumping or lifting water by wind, are seen from an entirely new point of view by the man of science; and he is able to suggest improvements that never could have occurred to a mind not illuminated by the numerous and brilliant lights kindled by modern researches into the laws of matter.

We have been led into this train of thought and remark, by perusing, in the *Horticulturist*, the valuable article on the "Application of Wind as a Power for Raising Water," from the pen of Prof. Kirtland, of Cleveland, to which the reader's attention is

invited in this number. By keeping the wheel always in the direct current, if it had any force, the flanges would catch it, and turn the wheel, as a current water wheel is turned. Such a wheel, with the necessary shaft and crank, may be made of iron for a few dollars; and every one can understand, from the illustration furnished by Prof. Kirtland, that this simple apparatus will work successfully whenever the atmosphere has any active motion. These current wheels (they are in no sense *mills*) and pumps, if manufactured in a large way, might be sold at prices which would enable every farmer to have a score of them for irrigation, and for the distribution of liquified manure, if he saw fit to make the mechanical power of the winds create wealth for himself and mankind.

With durable and cheap machinery, vast quantities of water may be elevated to any desirable height on every farm, for agricultural purposes; and the thanks of the farming community are due to Prof. Kirtland for his very intelligible illustration of a useful wheel and crank to be put in motion by wind. The water that falls upon every square foot of ground in a field is equal, on an average, in this country, to 200 lbs. a year; and so much of this ascends deep into the earth, and re-appears in wells and springs, always contains both the vegetable and mineral food of plants, (dissolved out of the oil in passing through it,) in greater or smaller quantities. In rare instances such water is poisoned by an excess of acids, or acid salts.

For the Farm Journal.

Augusta Rose.

TO THE EDITORS OF THE FARM JOURNAL:—

In reply

to your correspondent respecting this new Rose. I received from the proprietors early the past Spring, a strong plant inoculated, then showing several flower buds. They all expanded freely, and presented a perfectly double flower, of large size, very fragrant, and of a rich yellow color, deeper than any Chromatella I have yet seen. It appears to be quite a fine bloomer of strong, robust habit, and clearly allied to Solfatara.

Of its hardihood I cannot speak, not having had an opportunity of testing it. I regard it a very fine Rose.

JAS. D. FULTON, Philadelphia.

Extract of a letter from the Hon. Marshall P. Wilder, of Massachusetts:

"I am happy to say that, although I had heard a favorable opinion expressed in relation to the merits of this Rose, its beauty exceeded my anticipations.

"The Augusta Rose is certainly an excellent variety, having in its growth the climbing habit of the Noisettes, while in bloom and fragrance it seems nearly allied to the Teas. Its foliage is beautiful; its flower is very pure and delicate in color; its form globular and perfect, and although very double and full, appears to expand its buds freely. Considering these valuable characteristics, it may be esteemed as a good acquisition, and worthy of a place among the best varieties extant."

For the Farm Journal.

Reply to G. Blight Browne, on the Chemical and Mechanical Effects of Lime.

When I published in the May No. of the Farm Journal, my observations on your "Theory of the Action of Lime," I had but one object in view—to draw from you a vindication of your "theory," and elicit a more substantial argument in favor of it, than I conceived had been presented. You had introduced to the readers of this Journal, an original "Theory of the Action of Lime in Agriculture," which, from its plausible character, was admirably calculated to mislead into what I firmly believe to be error, many whose attention had not been previously called to the subject.

But, without further comment, and to come to the point at once, it may not be amiss to state the points on which we differ.

The disputed question, as I understand it, is simply this:

By what means does lime affect the mechanical attachment of the particles of the soil?

You contend, I believe, that lime does not mellow the soil by acting on the silicious matter therein, but that the disintegration of its particles, is wholly effected by the pressure of the carbonic acid liberated in a gaseous state from the lime.

It has been my intention to support the view that (as far as we have been able to learn from the revelations that chemistry has made on this subject,) the apparent mechanical change in the soil producing pulverency, &c., is effected by the re-action of the lime upon the silicates of which the principal portion of the soil is formed. I do not mean to be so bold as to assert that this is in reality the "only way" in which lime acts when rendering soil friable, but that it *appears* (from the researches that have been made upon the subject) to be the true cause of these singular changes. For who can say that the manifold and mighty secrets of nature's great laboratory have all been revealed? No! while we are yet compelled to "see through a glass darkly," and grope with a blind infatuation after the "hidden light," none but the visionary speculator will presume to say that such is the "only way" in which nature moves "her wonders to perform."

This view, then, that I have advanced in opposition to you, I beg leave to assert, is no dogma of my own. I have, I hope, not vanity sufficient to permit me to publish an original theory on so obscure a question. I advance it only as the carefully matured opinion that I have drawn from the writings of different authorities—men who have studied the subject in a *scientific manner*.

In reference to the origin of the carbonic acid, you distinctly assert that I have obtained a wrong impression from your letters. You now say that "the carbonic acid to which you have attributed the mellow-

ing of the soil is not the product of the vegetable matter of the soil," but that it is attributable to atmospheric absorption. It was my impression at first that you were willing to coincide with Professor Johnston, in his view that the salts of lime formed by the re-action of the vegetable acids of the soil on the carbonate of lime were capable of spontaneous decomposition—that a portion of the acid would absorb oxygen and pass off in another form of carbonic acid gas and water, leaving the lime in the original state of carbonate, *and ready again to undergo the same change*.

But this point which served to add a little plausibility to your theory, you have now entirely discarded.

You have left yourself no source from which to obtain the volumes of carbonic acid necessary to disintegrate a heavy soil, but the atmosphere, and to suppose that the lime can carry enough carbonic acid into the earth to support that mellowing influence that "lasts many years after its application," seems almost incredible.

But, before leaving this argument of yours, I wish to bring before you a point in my previous article, which you have entirely omitted defending, or even alluding to. I speak of the argument in which I urged that the extreme solubility of carbonic acid in water at the ordinary temperature, *would inevitably prevent its exerting any mechanical pressure on the soil around it*, and therefore, the idea that this gas can rend asunder the fragments of damp earth in which it is confined, is a *physical impossibility*. Here the decidedly classical analogy of the "loaf of bread" seems totally irrelevant, for it is the expulsion of the carbonic acid from its *solution in water*, by a sudden elevation of temperature, that produces the "lightness of the loaf," whereas in the earth there is no such calorific change, and the carbonic acid *must inevitably remain in a state of solution, or else be quietly carried off by the spontaneous evaporation of the water from the surface of the earth*.

In respect to the decomposition of the silicates of the soil by lime, I desire to be understood as not defending, or in any way supporting, the views of Professor Mapes, although our opinions may accidentally coincide, (and it is not unnatural that they should,) yet on this point I shall venture to stand upon my own footing.

Permit me, now, to quote from your reply to me, the following assertion:—"No chemist has (to my knowledge) been able to demonstrate that caustic lime, at the ordinary temperature, will combine with silica."

In answer to this I may be allowed to make the following quotations. The first is from "Liebig's Letters," one of the most popular works on Chemistry that has ever been published.

"Common potter's clay, or pipe clay, diffused

through water and added to milk of lime, thickens immediately on mixing; the lime in combining with the elements of the clay liquifies it, and what is more remarkable, liberates the greater part of its alkalies. These interesting facts were first observed by Fuchs, at Munich; they explain the effects of caustic lime upon the soil, and guide, the agriculturist in the application of an *invaluable means of opening it, and setting free its alkalies.*"

Johnston's Agricultural Chemistry, the invaluable friend and companion of every tyro in science, contains the following statement:

"Mr. Prideaux has lately proposed to mix up crushed granite and quick lime, to slake them together, and allow them to stand in a covered heap for some months, when it may be applied as a top dressing, and will readily give out potash to the soil."

In another place, speaking of the alkaline silicates found in the ash of the stem and leaves of the cereal, he says: "When the alkali is set free," (by the agency of carbonic acid,) "*the lime itself combines with the silica and hence one source of the silicate of lime in our cultivated soils.*"

Silliman's Chemistry, "designed for the use of Colleges and Schools," also furnishes me another instance:

"Lime is much used in improved agriculture as a manure, it acts to decompose vegetable matter, to neutralize acids, *dissolve silica*, and retain carbonic acid."

These quotations, taken from the most popular works, as well as the most reliable authorities, seem to prove very conclusively, that lime *will* combine with silica either in its isolated state, or when in combination with other substances.

The latter part of your critique contains a list of arguments brought to prove that the combination of lime with a previously formed silicate would not result in the formation of a double salt. All this is very well, when confined to the neutral silicates of potash and soda, but there are many other silicious compounds in the soil, whose chemical nature you have passed over in silence.

I hope, before long, to be able to publish in the Farm Journal, a paper that shall contain a full statement of the chemical character of these interesting compounds.

There is one more point in your article that forcibly recalls to my mind the pertinent words of the poet:

"Satire recalls whenever cherg'd too high,
Round your own fame the fatal splinters fly."

I speak of the manner in which you have misquoted and misconstrued me in several passages. In my communication I made the following statement: "A large quantity of a previously formed silicate possesses the property of combining with an almost indefinitely small quantity of a new base (such as

lime.)" Here, in comparison with this quotation, I place in your own language, the improper form into which you have transcribed it.

"Let us see what the learned commentator has really put forth in these few lines. He alleges that the silicates are capable of combining at the ordinary temperature with *indefinitely* small quantities of lime or any other base."

Here you have, by leaving out one word and substituting another, entirely destroyed the sense and meaning of the sentence.

By erasing the word "almost" before "indefinitely," you have found an admirable chance to make it known that my statement was contrary to the theory of definite proportions, in another place by substituting the word "any" you have endeavored to impress your readers with the idea that I had asserted a silicate would combine with *any* base, (no matter whether it was organic or inorganic,) and form a double salt, whereas I distinctly said it was *a* base (such as lime.) Had not the misquoted sentence been made use of several times, and the remodeled portion italicised, I would have been compelled to have overlooked it as an accident on your part.

In conclusion I would remark that although the subject is an interesting one, and also possesses much practical importance, still I believe every thing necessary to give us a clear understanding of each other's views has been advanced, and lest the readers of the Farm Journal grow weary of what has degenerated into a rather contentious dispute, I would respectfully decline any further discussion of the matter.

J. H. B.

Thornbury, Chester county, July 18.

For the Farm Journal.

Potato Disease.

J. LACEY DARLINGTON, Esq.

Dear Sir:—We promised your readers of the July No., the results of our experiment in regard to an insect making such ravages in the wheat field. We regret, however, to say, that the disastrous storm of July 1st, has destroyed our specimen, although deposited as we thought securely, and of which we had many reasons to believe, a full development of the nature of that mysterious disease. We hope another year, providing it appears again, will enable us to further our experiment, and lay it before the public.

We would wish to offer a few remarks, as the views which are entertained by Drs. Liebig and Klotzsch, of the potato disease; in part a preventative as well as an increase in quantity and quality. These noble naturalists have very carefully examined the motion of juices, in the animal and vegetable kingdom, and from the data of their examination it would seem, as if the potato rot is not due to a degeneration of the plant, but to a combination of external causes, and if

well understood, will enable the agriculturist, if not annihilate, at least diminish their hurtful influence.

Dr. Liebig, whose attention was directed to this fact, by experiments made by Hales and Knight, ascertained that "when rain falls after hot weather, and is followed by great heat without wind, so that part of the plant is surrounded by an atmosphere saturated with moisture, the cooling due to further evaporation ceases, and the plants are destroyed by fire-blasts"—(*Sonnenbrand*.) In this sentence, it seems to us, are made plain, some facts which researchers ascribed to insects, want of starch, &c., &c.

Vegetables constantly absorb moisture from the earth through their roots, which passes up into the stem, and is then evaporated again, so that there is of necessity a constant, yet harmonious circulation in a plant during life, and if by any external causes this transpiration is checked, it will have a highly deleterious influence on the plant. The potato plant, on account of its delicacy, suffers perhaps more than any other from such vital disturbances.

Now we know that there is a constant interchanging in the air, that which is close to the earth's surface will become heated, and thus lighter, and rise to make room for that below it or heavier air, on the same principle as the boiling of water. Now, during and after the falling of rain, it may so happen that the atmosphere surrounding the plant, will hold large quantities of watery vapors, having very near the same specific weight, being about 1-0008, as the sap itself, it will at once be apparent that exosmosis will be destroyed, and consequently produce what Liebig supposed, namely, *Sonnenbrand*. In such an instance the sap instead of passing out, by transpiration, will accumulate in the new tuber or potato, acting as a diverticulum, and produce what is termed a fleshy potato, full of sap, extremely delicate, and not able to withstand the decomposing influence of the atmosphere. An example of the same thing can be seen in apples growing in wet seasons.

In our next we will lay before your readers our views of this treatise, as to the best preventative, and also those of Klotzsch, who will be nicely remunerated by the King of Prussia, for certain experiments in relation to an increase in quantity and quality.

E. K. BEAVER.

Worcester, Montgomery county, July 23, '53.

For the Farm Journal.

Reaping and Mowing Machine.

WEST FALLOWFIELD, July 23d, 1853.

MESSRS EDITORS:—

In a country where a labor saving machine is calculated to benefit all classes of the community, every successful attempt at substituting mechanical skill for manual labor, should be regarded as a public benefit.

Many farmers have felt the necessity of some in-

vention to diminish the labors of harvest, and happily the time has nearly arrived when, in all probability, the cutting of grain and grass may be reduced to a small matter.

I have had in operation this season, a reaper and mower combined, made by Lee, Peirce & Thompson, Ercildoun, Chester county. I have had cut with it about twenty acres of grass, forty acres of wheat, and twenty acres of oats. Two horses will draw it without difficulty. The reaper will cut an average width of 5½ feet, making two acres for every three miles. It can be set to cut high or low, to suit the condition of the grain, and a little experience will enable any one to lay the sheaves so that they can be bound up as straight and snug, and with *greater ease and facility*, than after a common cradle.

The mower will cut about 4½ feet, or one acre for every two miles that it runs. In cutting grain or grass that is very much down, it is better to cut only two or three sides of the field, which will diminish the amount but make better work.

This machine took the first premium at Flower-town, and I have little doubt but it will answer the expectation and the demand of the farming community.

In order to prepare for its use, let every farmer make his ground smooth. N. W.

N. B.—I send you this very brief notice of the reaper, to satisfy the many enquiries that have been made in regard to its operation. You are at liberty to make such use of it, as your judgment may dictate.

Yours truly,

NATHAN WALTON.

For the Farm Journal.

Breeds of Poultry.

NORTHUMBERLAND, July 25, 1853.

MR. EDITOR:—

Dear Sir: Your intelligent correspondent "S," on page 109 of the Farm Journal, makes inquiries in relation to Shanghai, Cochin China and Chittagongs, which I will endeavor to answer as far as time, space, and information will permit me.

It is now conceded on both sides of the water, among "well booked up" fowl fanciers, that Cochin China and Shanghai are different names for the same variety or varieties. In this country, the term "Cochin China," is pretty nearly abandoned, while in England, the designation "Shanghai," has never been recognised. Here we have or pretend to have, Buff, Red, White, Black, Grey Dominique, Spangled etc., Shanghai:—there they have Buff, Red, White, and Black Cochin Chinas. John Bull has not yet discovered the Grey and Spangled sorts.

The fowls represented some years ago, in the Poultry Books and newspapers, as Queen Victoria's Royal Cochin China, with smooth dark legs, long tails and no great depth of quarter, if *truly represented*,

are undoubtedly of adulterated blood. I am strongly of the opinion, that all the pure descendants of the *Gallus Giganteus*, (of which the Yellow Shanghai is the best type,) should be marked with very short tails, yellow feathered legs, short wings, and deep quarters. Any decided variation from these marks would indicate more or less impurity. Wherever these are to be found, I care not what the color is, uncontaminated blood may be hoped for, if not relied upon.

While it is quite possible by careful and long continued effort, to attain almost any color among animals in a state of domestication, many if not all the birds palmed off as Black, White or Speckled Shanghais are to be regarded with suspicion. This opinion is founded upon a close inspection of the fowls themselves.

Some of the finest Cocks and Hens, shown at the Poultry Exhibition in Philadelphia, last November, were White Shanghais. A trio, entered by Mr. Herman Osler, of Germantown, exceeded in weight, any upon the ground, and in form and feather were unexceptionable, yet other fowls of the same name, and we were told of the same family, exhibited all the marks of worthless mongrels,—smooth slender legs, long wings and tails, thin narrow bodies, and not one in twenty promising to weigh five pounds at maturity. These poor creatures evidently “cried back” to the dung-hill side of the house, whence doubtless their white color had been so *speedily* derived. The name Shanghai, as applied to them, was farcical.

It seems to be admitted, that in the course of generations, this or any other color may be attained without crossing. In less than three centuries, the tamed descendants of the North American Wild Turkey, whose uniformity is as remarkable as that of speckled beans, have divided into as many complexions as can be found in any old granny’s crop of pure Dunghills. Why may it not be so with the lineal heirs of His East Indian Majesty—*Gallus Giganteus*? Form is a much stronger indication of purity than color.

In the best families of Buffs or Yellow Shanghais, an occasional white or black feather may be seen,—and it is likely that these markings patiently followed up, for a number of years, would lead to many white or many black feathers, and eventually to *all* over white or black. The writer once bred a flock of white puddle ducks in a few years, from three gray ones.

In regard to Chittagongs, my first knowledge of them was obtained from Dr. Bennett’s Poultry Book, in which the author, and his able correspondent, Dr. Kerr, (Asa Rugg,) exalts them above all other fowls for *stature and personal appearance*. I purchased a stag and two pullets from the latter gentleman. They were by no means remarkable for

uniformity of plumage, but came up to the highest figure for size, fertility and hardiness. Equal to the strong Indian, they have *constitutions* “like the United States.” They are less inclined to sit than the Shanghais, and owing to their longer bodies, exceed them on an average for weight. I have two hens of this variety now, whose joint weight, in March last, was 20 lbs. 3 oz. Several pullets, of the same sort, from seven to nine months old, weighing over 8 lbs. Few Shanghais will come up to these figures. Of their remote ancestors, I am not prepared to speak. They are, no doubt, closely related to the other very large breeds, but whence their variation, I have never been able to learn. They are larger, hardier, and much more prolific than the Boobies. They do not feather so rapidly as these, but are not so long in attaining a covering as the Shanghais.

If the Poultry Fancier wants great weight, and is willing to run the risk of a parti colored flock, he cannot do better than rear the Chittagongs. Nay, if he be careful and judicious, he may breed them of a tolerable sameness—almost any color that pleases him. For my own part, I would be very sorry to give them up.

The Boobies (or Bucks county Fowls) are never Red, or Yellow. They run from Black to Grey,—the most of them dotted with white on a black ground. They are probably related to the Jersey Blues and Black Javas. In most cases they feather as rapidly as the smaller breeds. They are gouty and of late maturity. You may breed them a long time and get nothing from them that resembles a Shanghai, in quality, shape or color.

Lately another variety of Shanghais has started up, under the euphonious title of “Brahma Pootra,” and judging from a pair of young ones, which the writer received a few days since, from his friend Dr. McClintock, of Philadelphia, equal to any thing that have yet made their appearance, of a beautiful light color and the most perfect *big breed* shape, they will no doubt have a great run among the fancy. At present, a ferocious war (of words) is raging in relation to them, between two of our most talented and distinguished hen-grannies, Dr. Bennet and Mr. Burnham.

“Charge Burnham! charge!
On! Bennet! on!”

Perhaps some of our Southern friends, or Lord Northby, will see the aptness of the quotation.

As the science of Henology progresses, Brahma Pootras, Hoang Hos, Heng Kongs, Cochin China, Imperial Chinese, etc., will resolve themselves under the comprehensive family name of *Shanghai*, and if further distinctions be necessary, the surnames Black, Buff, White, Spotted, Ringed, Speckled and Streaked, may be added.

Yours truly,

DAVID TAGGART.

For the Farm Journal.

Fly in Wheat.

MR. DARLINGTON:

Dear Sir—Mr. E. K. Beaver, in your July No. of Farm Journal, seems to infer from the depredations of the fly on the wheat in Montgomery and adjoining counties, that some new insect has made its appearance. He doubts the eggs being deposited in the Fall—and in like manner doubts their being deposited in the Spring! but supposes that—because different fields are differently affected—and the rye escaping the injury, “that the cause *may be looked for in the grain of the wheat prior to sowing.*” He says, “the deposition of the ova or egg are generally formed above the second joint.” Now I would merely suggest—how could the ova or egg remain dormant all Fall and Winter, and then about the 20th of May, crawl up the stem to the second joint? An insect in the ova state evidently has no means of locomotion, and if so, it must be placed by its parent on the spot where found.

As Mr. B. desires the opinion of others, “on this obscure yet wide spread disease,” I send you mine in a few words. Our fields in this vicinity being similarly affected, though not to the same extent, we consider it nothing more or less than the old pest—Hessian fly, having made a deposit of its eggs, late in the Spring, a very frequent occurrence. Indeed I have seen a deposition of eggs in the Fall, and two in the Spring some years since, the fly hatching out in April, and again in May and June. Had the deposit been made in the Fall, or early in the Spring, the eggs would be found on the first instead of the second joint. I doubt very much if the cause exists in the grain prior to sowing.

Very respectfully, J. B. GARBER.

FLORAL RETREAT, July 30th, 1853.

For the Farm Journal.

Agricultural Review, No. 6.

Pasture. Seventh, eighth and ninth in rotation is principally devoted to fattening stock for market and grazing horses, cows and oxen for home use, some little to raising lambs for the butcher and butter dairying. By this time, the natural grasses from spontaneous growth, claim preeminence. First in value for its early growth, quick renewal and nutritious qualities, is the green grass, *poa pratensis*; next the blue grass, *poa compressa*, white clover, *trifolium repens*, and red top, *agrostis vulgaris*; these mainly contribute to the high estimate placed upon the Brandywine hills and meadows, for grass feeding. As intimated in a previous number, this branch of farming is comparatively of modern date. The early settlers were *grain raisers* upon an exhausting system, and so successful had they been in this, that though William Penn described these lands in his day, “as three times richer than the front lands,” or those

nearer the rivers, by the Assessor's list of 1765, nearly all holders returned a considerable share of their lands as “uncultivated,”—it had become “worn out.” It was left to the introduction of a regular rotation, combined with the use of artificial grasses, and the application of lime and plaster to cause these “worn out” fields to bear again upon their sunny slopes, “the cattle of a thousand hills.” These are brought from New York State, Virginia, or the boundless West, purchased in the Fall and kept upon corn fodder, oats, straw, and hay, for about five months of the Winter season, turned to pasture about the 1st of 5th month, (May,) and sold the latter part of Summer and early Fall. The grass season, therefore, comprises about seven months. Very highly cultivated land may be able to feed a steer this length of time upon one acre, but the average usually found requisite, is double that amount. Previous to the recent practice of supplying the Eastern cities with vast droves of home-fed cattle from the vallies of the Shenandoah, Sciota, and other sections of the teeming West, and when land did not command the price it now does, grazing was profitable to the farmer of Chester county. But if this is the main object, rather than exemption from the labor attendant upon the pursuit of other branches, it will be necessary for them to turn their attention more to the production of articles adapted to the retail market of the great and growing city, the vicinity of which, creating a demand for such, has enhanced the value of their lands.

The following I believe to be a pretty correct exhibit of “grazing” and “dairying:”

Feeding one steer on two acres, seven months.

Fencing	-	-	-	-	-	\$2 00
Taxes,	-	-	-	-	-	1 00
Interest of \$85 per acre,	-	-	-	-	-	10 20
Keep five months, at 40 cents per week,	-	-	-	-	-	8 40

Expense,	-	-	-	-	-	\$21 60
Advance upon cost,	-	-	-	-	-	18 00

2) 3 60

Loss per acre, - - - - 1 80

Feeding one cow on two acres, seven months.

Fencing,	-	-	-	-	-	\$2 00
Taxes,	-	-	-	-	-	1 00
Interest,	-	-	-	-	-	10 20
Keep,	-	-	-	-	-	8 40

Making and marketing butter, 160 lbs. at 7 cts., 11 20

\$32 80

Product, 160 lbs. at 25 cents, - - - 42 00

2) 7 20

Profit per acre, - - - - 3 60

C. B.

Birmingham, 8th month.

For the Farm Journal.

The Fruits of June—Cherries and Cherry Trees.

MR. EDITOR:—

The warm days of Spring, and the quickly following first hot days of Summer—the time of Spring fever, and panting languor—have now passed into the established heats of Summer, more endurable, because the season brings with it its mitigations. But these first sudden and sweltering heats, meet us all unprepared. We cannot all at once forget the cold that we felt but yesterday, and we hesitate to let the air have full play upon our ribs, and even then it does not readily give tone to the throbbing system. In the way of food, the provisions stored up through winter are stale, or dry, and heating. Something a little acid and very juicy, is what we crave. We drink acidulated water with delight; salads are refreshing; good, large, ripe cherries, fresh from the tree, reconcile us, and start expressions of delight; and the grand luxury and boast of the season, 'a dish of ripe strawberries smothered in cream,' gratifies every sense, and leaves nothing to be desired, only that it might be 'always June.'

Comparatively but few accept for themselves these enjoyments from the offering hand of Nature. True, many have cherry trees, but either they are so few, or so late, or so indifferent in sorts, that they minister but little pleasure. And fruit may be purchased in the market, but this necessity of paying, and roundly too, and getting in return but stale, bruised or sweated fruit, or what is yet sour, unripe, and unwholesome as well as unpalatable, is a different thing from the enjoyment of picking one's own perfectly ripe fresh fruit, from one's own generous trees, whence the finest of sorts are glittering successively into the lustre of maturity, and offering their refreshing juice at 'morn and noon, and dewy eve.'

An intermediate enjoyment is that of going, when the appetite becomes imperative, a mile or two through sunshine and dust, to a place where cherries grow, begging or buying leave to eat—taking a glut that it is hoped may do for a week, and then going home to think it had been as well on the whole, to have staid there, and that the cherries eaten from the tree, are not much more wholesome than the market ones.

But cherries, quite ripe and fresh, are most entirely wholesome, and even sanitary, and are eaten by children who have constant access to them, and who enjoy them so greatly, without the fear of ill effects. They are Nature's own provision for the season in which they appear, and instead of inducing the diseases of Summer, they prevent and cure them.

Cherry trees, especially of the sweet kinds, are the handsomest of fruit trees, and a well planted avenue or grove of them adds greatly to the beauty of a country home. They are less liable to disease or injury by insects—the productive sorts are more uniformly, and constantly fruitful than most other

fruits, only equalled in this respect by grapes, (the cherries of Autumn,) currants and some other berries.

Cherries of many kinds attain a circumference of over three inches; of such it is no mincing to "make two bites at a cherry." By the rule of compensation which prevails through Nature's works, fruits with so much rich flesh are seldom found to contain a perfect seed.

Besides the enjoyment furnished by the beauty of the trees, and the excellence of the fruit, there is a great fund of pleasure in the diversity of colors, season, form and flavor. A dish of the earliest, composed of Early Purple, Early White Heart, Knight's Early Black, and Cob's Transparent, mingled with a few of the bright green leaves, as a foil to their brilliant lustre, is 'beautiful exceedingly.' Before these kinds are past, the magnificent Black Tartarian, the sprightly, tender Elton, the delicate Belle of Choisy, and the yet acid Mayduke, come forward with their claims for admiration. Later yet, the rich Black Eagle, the beautifully marked Burr's Seedling, and the grand Napoleon, and with them the excellent fruit of the large Weeping Cherry tree, and the Reine Hortense.

Still the eye is not tired of seeing new colors and forms, nor the palate of tasting fresh flavors; and while the fruits of June are yet in perfection, July advances with new liveries and new claims. The great Bigarreau, the very distinct and valuable Butner's Yellow, the solid and pungent Gridly, the acid Belle Magnifique, the vinous Downer, and others keep up a supply till August, and even later if it could be desired, among the host of other fruits that then begin to call for notice.

The culture of the trees shall be the subject of another paper.

WM. G. WARING.

Boalsburg, Centre county, Pa., July 16, 1853.

For the Farm Journal.

Drouth, Plastering Corn, &c.

TO THE EDITORS OF THE FARM JOURNAL:—

Nature, in the operation of her Laws, is often suggestive and highly instructing to an observing mind. Her operations on the surface of the earth, in the atmosphere, and in the vapours that rise above use, are well worthy our notice. And perhaps no class of men have more to do, directly or indirectly, and feel more interested and profited by the operations of the laws that attend these elements, than the farmer. That the soil be fertile, the air healthful, and that the clouds descend in fruitful showers, is his first interest as regards his occupation. The farmer, from what he sees passing around him, may not only derive lessons of science relating to agriculture, but lessons also of moral truth; as when Providence

sees fit to withhold the showers of rain, and leave our seed fields to a scorching sun and drying winds. This has been the case to an extent not known for years in our county, (Mifflin,) but little rain having fallen for about two months. The oats and potato crops in many instances, are entire failures, and the prospects of the corn crop very unpromising.

This season, in this section of the State, has been well suited to show the effect of plaster on Indian corn, and to give some idea of the amount of moisture required to bring its nutritive qualities into action on the plant. Its effect or non-effect, according to the time of application, has been very marked on several fields and parts of fields, that have come under notice, one of which is our own.

About one acre of this field of corn was plastered, while the ground was still quite moist, and but a few hours before a fall of rain. The remainder of the field was plastered within two or three days after the first application, and while the ground was in growing condition. A shower of rain fell shortly after, sufficient to cause the plaster to disappear on the whole field, and then little or no rain fell for about six weeks.

In about three weeks after plastering, I observed a difference in size and colour of the corn in that corner of the field where we first plastered, and the other part, (the drills run angling across;) the first plastered, was a deep green, the other yellow, and much less in size. This difference became more and more marked from week to week, until our neighbors began to wonder why there was so much difference in our corn. For some weeks past the plaster last applied, has been taking effect, and the corn has changed to a healthy green color, but it is still not less than ten days behind the first plastered, in growth.

It appears evident from this, that it requires a very considerable amount of rain to bring fully into effect the fertilising agency of plaster. And it is a matter of some importance to the farmer, to have it applied to his corn crop as early as possible, that it may have the advantage of the showers that may fall. We think it is sometimes delayed to disadvantage, in waiting until the plants are all up, that the plaster may be thrown on or around the roots of each stalk. Experience teaches that this is not necessary. We have applied it on our corn broadcast, with as much success as when we dropped it on each hill, and we believe it is not possible to draw any difference (other things being equal) in a field of corn, between the part having the plaster applied to each hill, and another part of this same having it applied broadcast. Our method, however, is to scatter it along in the row or drill, making it appear white. This can be done before any of the corn is above the ground, and so may be prepared to benefit the plant as soon as up.

J. H. ALEXANDER.

For the Farm Journal.

Black Knots on Plum Trees.

MR. EDITOR:—

Having seen and read many communications on this subject, in different agricultural papers, and having myself had considerable of the disease on my plum and cherry trees, I long since endeavored to discover the cause, but so far without any satisfactory result.

Many writers contend, and even give a description of an insect, which they say causes the mischief.

I have time and again examined these tumors, in all stages of their growth. I have found the larva of insects after the tumors became of some size, 'tis true, but in their incipient stage, could never, even with the aid of a microscope, detect the least vestige of insect life. A friend in Columbia, once undertook to convince me of the truth of the insect theory by ocular proof. He had a number of plum trees in his yard, and many of them bearing an extra large crop of—knots. We at once cut down some branches and began the work of dissecting the knots in real scientific style—that is by a clean incision from one extremity to the other, and what did we find? why an abundance of worms to be sure; here was a confirmation; as my friend said, 'seeing is believing'—here is the proof. However as these larvae were old acquaintances of mine, I at once knew them to be the progeny of the cureulio, having frequently seen them in similar situations on my own trees. Such an exhibition of worms, living and preying on these knots, would no doubt have convinced most people, that they were the cause of the disease. As for myself, I am fully satisfied they had no more to do with the cause than the "man in the moon," perhaps less, but were merely an effect of some other and prior, but to me unknown cause—the cureulios using these tumors after they become of some size, in the same manner, and for the same purpose as the fruit,—“to increase and multiply.” In fact the larvae appear to be quite as much at home in these tumors as they are in the fruit itself. When the knots become enlarged, the branch on which they grow, becomes diseased for some inches in the heart of the twig, and unless the branch is cut off, will reappear, and increase in numbers until the tree is destroyed.

From the effects of this disease, the common Morello cherry has been nearly swept from the country; while the English and plum stone Morello, are, so far as my observations extend, entirely exempt though growing in close proximity to affected trees. Were these knots caused by insects, it would be passing strange that two kinds of Morello cherries should be entirely exempt from their depredations, and the common Morello, the Bleeding Heart cherry, and many kinds of plum trees, so congenial to their tastes. I have often found them on the stems of young plum

trees, and in such instances would cut them out—paring down to the sound wood, covering the wound with some wax or cow dung, but in every such instance, the tumors would re-appear, and generally destroy the trees.

Some medical gentleman recommends the application of Quassia, after cutting out the tumor, but never having made the application myself, can not say if it will effect a cure. A friend tells me that he has frequently applied common table salt to the wound made by the knife, and with complete success, this destroys the virus, without detriment to the health of the tree.

So far as the common Morello is concerned, the loss need not be regretted, as the English and Plum-stone varieties, are greatly superior to it, both in size and quality. On many of the finer kinds of plums a remedy would be very desirable. Cutting off the diseased twigs will arrest it, and if continued from year to year may ultimately banish, yet to cut off a vigorous branch with dozens of fine plums on it, is, I fear, seldom attempted.

I should be pleased to hear the opinion of others on this subject, through the "Farm Journal," as many of your correspondents have a better knowledge of Pomology and Insect-ology than the writer of these crude remarks.

What says J. K. E.?—Are the knots on plum and cherry trees the cause or effect of insects? Or is it a disease somewhat analogous to the yellows of the peach-tree?

J. B. G.

Floral Retreat, July 30th, 1853.

For the Farm Journal.

Chicory.

MESSRS. EDITORS:—

I notice in this month's number, your remark that *Chicory*, (*Chicorium Intybus*), is considered in your neighborhood a noxious weed, and also that in the form of Chicory coffee, it will not supply a good cup of Java, &c.

The *Chicory* in its native habit is, as every other of the most useful plants with which we are acquainted, a weed. Those plants that are the most economical and yield us food, covering, occupation and profit, are all, in their wild state, weeds!

The *Sugar Cane* is a weed in the East Indies and Africa, although it forms the staple and riches of several very extensive countries. The *Potato* is a weed on the hill sides of Chili and Peru, still now, at present, could we or the nations of Europe do without it? The *Beet* is a weed on the shores of several countries in the Mediterranean, and what important part does it not make in agricultural economy? The *Madder* is a weed found on the road-sides of the south of France, and still it constitutes one of the staples of French agricultural industry. We have a weed growing common enough in nearly all the Middle and Northern States, the large *Thistle*, and still no better

or more palatable food can be found, for the mule or the ass. The *Mullen*, which grows abundantly wild every where, and is neglected here, is sedulously cultivated in France and Germany, as a valuable medicinal. *Plant Pigweed* or *Punline*, is likewise cultivated in Europe as a delicate and very wholesome kitchen vegetable over great part of Europe.

What is *Timothy*, *Herd's Grass*, *Blue Grass*, but individually and originally weeds—and what part do they play in our agricultural economy? *Indian Corn*, *Wheat*, *Barley*, *Oats*, *Rye*, *Flax*, *Hemp*, *Cotten*, and in fact, all useful plants, are, in their native habits, weeds, and some of them noxious weeds, but cultivation has adapted them to our urgent wants, and brought them to that perfection, that their utility constitutes the basis of our existence, as individuals as well as nations.

With regard to the *humble noxious weed*, Chicory, I recommend it for its utility and worth, as set forth in the short paragraph in the July number. Manufactured in Chicory coffee, it is not intended to supersede coffee, but experience has proved that mixed with it, it is likewise useful and beneficial.

J. A. N.

August, 1853.

For the Farm Journal.

Knots on Plum Trees.

FARM LAWN, 25th of 7th month, 1853.

MESSRS. EDITORS:

The inquiry has been started, in your June number, relative to the cause producing the excrescences on the young branches of the plum and cherry trees. They have been generally ascribed to the ovipuncture of the insect whose larvæ are so frequently found nidifying in them. And from the tacit adoption of this time-honored opinion, both by the commonalty and savans, it may be deemed rash and presumptuous to express a doubt of its correctness:—and he who is bold enough to do so, may expect either to be denounced as a dangerous innovator, or consigned to silent contempt for his heterodoxy. On reflection, however,—and I may add—after careful examination, there seems to be room for further inquiry, before the question can be considered satisfactorily determined. The so frequent occurrence of larvæ in the knots, may have led to a hasty conclusion—while the apparent analogy of the *Oak-gall*, and a host of allied productions, which do arise from insect ovipuncture, has gone very far to confirm it in the public mind. But it would be conceding too much to admit that the larvæ found in diseased vegetable growths, do, always, by the aid of a morbid vital development of the plant, build up for themselves the structures in which they nidify.

The excrescences when mature become covered with a small *Fungus*, (or perhaps more correctly speaking, with the fructification of a *Fungus*), the

Sphaeria morbosa, Schw. This *Sphaeria* is perhaps more constant on the surface than the larva in the substance of the excrescences. Would it not, therefore, be quite as rational to conclude that they were caused by the Fungus, as by the Insect? Possibly the discovery is yet to be made, that the excrescence itself is the true *Sphaeria morbosa*, and the little granules seen upon its surface, the fructification. This would be in accordance with what is known of many species of *Sphaeria*, and other Fungi. The mycologist can readily refer to numerous parallel cases—I will merely mention a few, for the benefit of more general readers, which fall within the cognizance of common observation.

The well known knots on our hedging thorn (*Crataegus cordata*—Ait.) commence very much in the same manner as those on the plum and cherry trees, but that they more speedily develop the fructification of a most beautiful Fungus—the *Roestelia cylindrica*—Lk. In the latter case, however, the fructification springs directly from the interior of the tumour, and before it has suffered from insect depreda-

tion, thus exhibiting, much more satisfactorily, the true nature of the morbid structure.

The apples so common at this season of the year on cedar trees, (*Juniperus Virginiana*—Lin.) will next year develop the fruit of the singular and elegant Fungus—the *Podisoma macropus*—Schw. The same remarks will apply to the extensive excrescences often seen upon the branches of the same tree, and which produce *Gymnosporangium Juniperinum*—Lk.

The Ergot of the common Rye, (*Secale cereale*—Lin) and other graminaceous seeds, when mature, produces upon its surface a very diminutive fructifying Fungus—the *Ergotoetia abortifacens*—Queck.

In all instances here given, and hundreds more could be cited, it is probable that the tumid mass is the proper Fungus plant, producing its fruit, in due season after its kind—and I have yet to learn that the plum and cherry excrescences are not consimilar.

If there is wisdom in the foregoing remarks, a hint to the wise will be sufficient,—and if they are altogether chimerical I have written *Quantum Sufficit*

Apples.

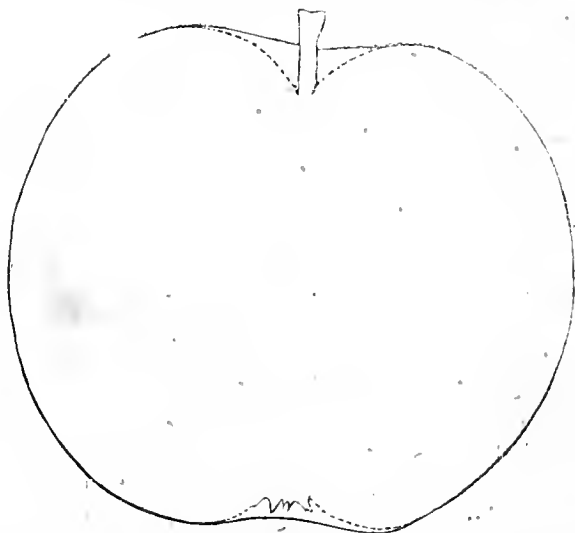


Fig. 1. Early Harvest.

Fig. 1. PRINCE'S HARVEST, YELLOW HARVEST, JULY PIPPIN.—For an early apple this stands deservedly at the head of the list, and should be cultivated by every fruit grower. It is very productive, of a rich, sub acid flavor, of fair size and answers well either for cooking or as a handsome desert fruit. It commences ripening early part of July, and continues in use through that month, and the early part of August. Coming into market thus early in the season, and with its attractive appearance, a bright straw color when fully ripe, it is one of the most profitable varieties for the market. Size medium, somewhat oblate, roundish, smooth. Stalk $\frac{3}{4}$ of an inch long, rather slender; calyx moderate sunk; flesh white,

tender, juicy, with a rich, sub acid flavor, shoots erect, somewhat diverging, often forked.

Fig. 2. RED ASTRACHAN.—This is one of the most beautiful apples known, is of Russian origin, ripening a few days after the Prince's Harvest, not quite equal to it in flavor, but a variety that will always sell, from its beautiful deep crimson appearance, with a bloom like a plum. It is also very productive, a regular bearer, and is a superior cooking apple. The tree is a vigorous grower, with broad leaves; fruit large, roundish, nearly covered with deep crimson; stalk rather short, deeply inserted; calyx set in a slight irregular basin; flesh white, rather crisp, juicy.

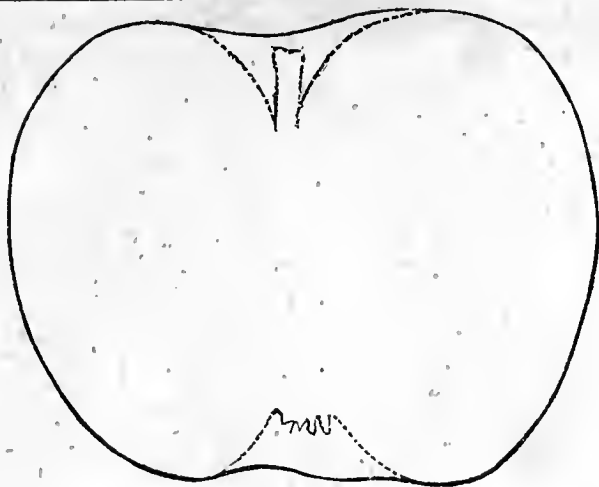


Fig. 2. Red Astrachan.

Pears.

Fig. 3. Bloodgood.

Fig. 3. BLOOD GOOD.—This pear was brought into notice by James Bloodgood, nurseryman, of Long Island, in 1835, who received it from a person unknown, and its history he has never been able to trace. It is probably a chance seedling. We can say of it we never want any thing better. It is of the very highest quality, and where only a few varieties are cultivated, this unhesitatingly should be one of them. Size medium, turbinate, inclining to obovate, thickening very abruptly into the stalk; skin yellow, with russet dots, having a russet appearance on one side; calyx scarcely sunk; flesh yellowish white, buttery and melting, with a rich sugary, highly aromat-

ic flavor; ripe in the early part of August. Does well on the quince.



Fig. 4. Madeleine.

Fig. 1. MADELEINE.—Rather smaller than the preceding and ripens earlier, about wheat harvest; probably the best pear of its time of ripening. It is of French origin, and derives its name from being in perfection at the feast of St. Madeleine, in France. We consider it of the first quality. Size medium, obvate; skin smooth, pale yellowish green, sometimes with a faint brownish blush; stalk slender, one and a half inches long, set in a narrow cavity; calyx small, in a very shallow basin; flesh white, juicy, melting, with a delicate somewhat perfumed flavor. It ripens early, both on pear and quince.

The Palmer Worm.

An insect, formerly known by this name, has appeared in great numbers upon fruit and forest trees, during the past month. Apple, cherry, and plum trees, and, among forest trees, the white oak have suffered more or less from its depredations in all parts of New England, and in the State of New York. Communications concerning it, accompanied by specimens, have been sent to me from Bradford, Andover, and Westboro', Massachusetts; from New Haven and Salisbury, Connecticut; and from Keene and New Boston, New Hampshire. About the 10th of June, the same insects were first observed on fruit trees in my own garden, where, however, they have not been numerous, and have not done much injury. In other places, their ravages have been deplorable, and have been compared to those of canker worms; the leaves of trees attacked by them looking as though they had been scorched by fire. In some of the orchards, they have not spared even the fruit, which has been attacked and mostly destroyed by them. They have now come to their growth, and have finished the course, in their present form for this season.

These insects agree, in all respects, with the accounts given of the palmer worms that prevailed in many parts of New England, in June, 1791. It was remarked, after this great visitation, that they did not return the next year in the same places. Whether, until the present season, they have ever again been observed, in the like profusion, is unknown to me. Probably some of these insects might have been found almost ever year by diligent search. Perhaps they are the same as those heretofore called *fire worms*, of whose history I cannot find any thing in print.

A particular description of the palmer worm may be thought unnecessary and superfluous, since the insect has been so recently and so widely observed, and has been pretty well described in the newspapers. But as I have little more to add concerning it, and have been applied to publicly and privately, for information on the subject, it may be proper to put on record an account of it as it passed under my own observation.

In its early stages, this worm, or caterpillar, though varying somewhat in color, is mostly pale green, with two slender brown lines along the top of the back, and a pale brown head. It has sixteen feet, six of which, near the head, are jointed, and end with a single claw; the others are merely fleshy protuberances without joints, the terminal pair being the longest. When fully grown, the insect measures half an inch, or rather more, in length, and then bears a striking resemblance to the common bud-worm of the apple tree; the back assuming, generally, a darker color, and the sides of the body, being marked with black points, arranged three together on each side of every ring. Two blackish semi-circular spots or marks, may also generally be observed, at this period, on the top of the first ring. A few short hairs may be seen on the body by means of a magnifying glass. On my own trees, these insects have confined themselves mostly to the terminal leaves and buds; on others, in places where they have been numerous, they have spread all over the leaves, and have devoured the whole green substance, leaving only the net-work of veins untouched. They are exceedingly active in their motions, moving either forwards or backwards at pleasure, with a kind of impatient jerking motion, which renders it difficult to hold them. When the trees are shaken, these worms drop, and

hang suspended by threads, like canker worms. Whether they leave the trees in the same way, when they undergo their course,—if indeed they do leave them at this time, and where they undergo their final transformations, I have not ascertained, being prevented by other engagements from watching their further progress.

One of my correspondents has informed me that these worms mostly disappeared after a late hail storm; and another one states that they all took leave during a heavy shower on Monday last. A few, that were kept for observation in a glass jar, have covered themselves with a thin web of silk, and some of these have already taken the chrysalis from within their webs. More than half of my specimens have been stung by ichneumon flies, which have deposited a single egg in each one of their victims. The maggots bred from these eggs, are now leaving the lifeless worms, and are spinning themselves up in white, oblong oval, silken pods or cocoons.

If the palmer worms elsewhere have suffered the same fate in the like proportion, we have little cause to fear their ravages next year. The chrysalis is about one quarter of an inch long, of a pale yellowish brown color, and differs from that of the bud-worm in not having transverse rows of teeth, or little notches, around its body. The final transformation remains to be observed; and, until the insect is obtained in the winged or moth state, its scientific name cannot be determined.

On the morning of the 28th May, I saw, in the cemetery at Worcester, immense numbers of gray or whitish moths, about twice the size of the common clothes' moth, flying about almost in swarms, being disturbed from the grass and trees by my passing. Two days afterwards, a few of the same little moths were seen in my garden; and Dr. Sanborn informed me that his garden was alive with them on the 23d of May. They were also very numerous, about the same time, at New Haven, and in other places since visited by the palmer worms. But whether the latter were, or were not, the descendants of these little moths, it would not be safe now to say. The moths, though not wholly unknown to me by sight, before this Spring, have heretofore been so rare that my collection contained only a single specimen, and that in too poor a condition to enable satisfactorily to investigate its scientific character and ascertain to what modern genus it belonged.

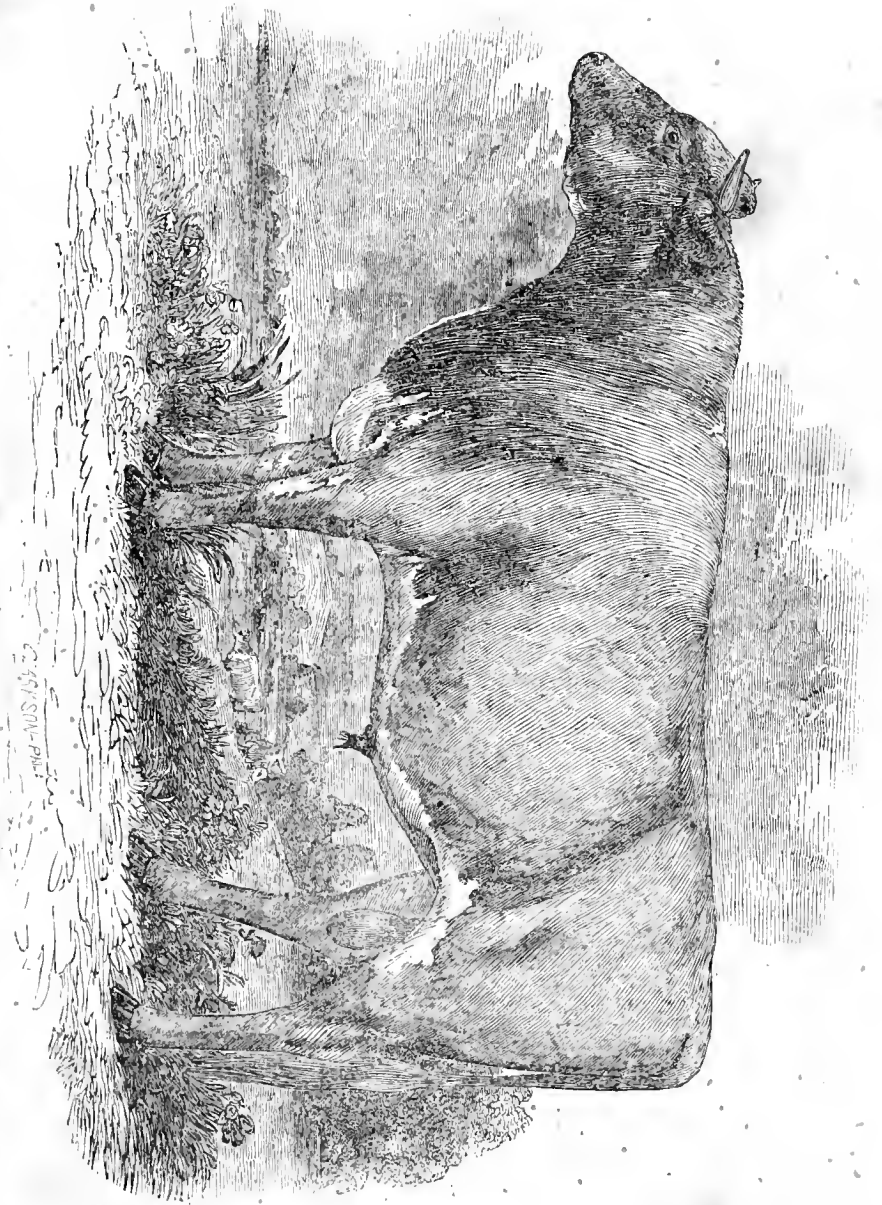
As attention has been generally directed to the habits of the palmer worm during the present season, other persons, more favorably situated than I am, may be expected to pursue and make known the further history and transformations of this destructive insect.

I regret not being able to give a better account of it at this time, and still more that the pressure of my official duties necessarily interferes with the continued and further investigation it would otherwise please me to make upon it.—[New England Farmer.

T. W. HARRIS.

Cambridge, Mass., July 6, 1853.

FARM EXPERIENCE.—Twenty years experience upon a farm has taught me that one acre of land, well-manured and tilled, will produce more than two acres which received the same amount of labor and manure. That one cow, well fed, will be of more profit than two fed upon the same amount of fodder; this will apply to all other stock,—that one ton of hay cut when the grass begins to blossom, will produce as much milk as two tons, cut when the seed is ripe.—Anon.



Full Bred Alderney Bull, Louis XV., Owned by Francis & Marshall Strode, Near West Chester, Pa.

Bred by Thomas P. Remington, got by Pat, Jr., bred by Roswell L. Colt, Patterson, New Jersey; dam Louisa, also bred by Roswell L. Colt. Pat was lately sold to A. Alexander, to go to Kentucky, for \$200. Louisa is of good size, will weigh 500 to 600 pounds.

Pure Alderney or Jersey Bull

Owned by Marshall and Francis Strode, near West Chester, Chester County, Penna.

On opposite page we give a portrait of a superior Bull of this breed, being the same animal to which we adverted in a former number, then owned by John Worth, of E. Bradford, but since purchased by his present owners. We consider it a fortunate circumstance for the dairymen of this section of country, that they have now an opportunity of obtaining a cross, by this bull, with their best milking cows. He possesses in a remarkable degree the property of good *handling*, a point too much overlooked in judging of stock, and which we consider of great importance. Guenon's marks of milking qualities are also strongly developed. In a milk or butter dairy, *size* no less than many other desirable points of other breeds, the farmer can well afford to sacrifice, provided he secures these primary objects combined, with *easy feeding*, kindly disposition, and *habit* of milking close up to time of calving. For these objects the Jersey cow can be recommended with great confidence, inasmuch as they have been bred with this view, exclusively for a very long period; and as a matter of necessity in so circumscribed a spot as the isle of Jersey, other considerations were altogether lost sight of. They may be said to have a *hereditary* superiority for rich milk and butter. The old unimproved Jersey cows from 1800 to 1830, though far inferior in feeding qualities and neatness of form, to the present, was even then counted superior to every other breed for the uniform richness of their milk, which from fresh pasture in spring was said to appear like clouted cream. "She had always possessed the head of a fawn, a soft eye, elegant crumpled horns, small ears, yellow within, a clean neck and throat, fine bones, a fine tail, above all a well formed capacious udder with large swelling milk veins." She had however no tendency to fatten, all fattening property being absorbed by the great quantities of milk and cream she produced. About twelve years ago, attempts were made by the Jersey Agricultural Society to remedy these defects, by selecting the best models and crossing them with a fleshy well conditioned bull, of a race that was also known to produce quality and quantity of butter, and the result has been a breed with a rounded form with a tendency to make fat, without having lost the butyraceous nature. An analysis of the milk of the Jersey cow, has been made by Professor E. Emmons, of Albany, which on comparing with an analysis of the milk of the Ayrshires made under the direction of the British Government, by Professor Thompson, for the purpose of determining the relative value of food in the production of butter, resulted as follows: It will be well to recollect, that the Ayrshire cow, whose milk is superior to the *generality* of other cows, was in this case fed on *grass*, while that from the Jersey cow, whose

milk was examined; was from an imported animal by John A. Taintor, Esq., selected by himself in Jersey, but she was in *low condition*, not having recovered from the effect of a voyage. Her milk was taken in winter, after recent calving, but she had been fed *only* on hay, with an allowance of four quarts of bran as her daily allowance, but notwithstanding yielded eleven to twelve quarts of milk in 24 hours.

Milk of Ayrshire Cow. Specific gravity 1.029.

Water,	87.19
Dry matter,	12.81
Butter,	3.70
Casein,	4.16
Sugar,	4.35
Ash,	.56

Milk of Jersey Cow. Specific gravity 1.031.3.

Water,	84.73
Dry matter,	16.27
Butter,	8.07
Casein,	5.02
Sugar,	5.05
Ash,	.79

Professor Emmons says, "according to the foregoing result, the milk furnished by the Jersey cow, owned by Mr. Taintor, will amount to 154 lbs. per week and should yield 12.32 lbs. of butter. In Professor Thompson's experiments, the yield of milk for sixteen days was 309 lbs. 14 oz. 6 drs. which gave 11 lbs. 14 oz. 11 drs. of butter. During an equal period Mr. Taintor's cow will give 352 lbs. of milk, which will yield 28 16-100 lbs. butter, giving a balance in her favor of about 18 lbs.. An Ayrshire cow, owned by another gentleman, yielded 516 grs. of butter per 16 ozs. of milk. Milk taken from the cans of a milkman, which was regarded as good milk, gave 375 grs. of butter per 16 ozs. An analysis of the milk of a common cow, which is interesting by comparison with that of the Alderney or Ayrshire, resulted as follows:

Water,	90.48
Casein,	3.88
Butter,	2.88
Sugar,	1.78

The above experiments are conclusive as to the superiority of these two excellent breeds of cows, Ayrshire and Jersey, for dairy purposes. We gave in former numbers of the Farm Journal, portraits of both bull and cow of the Ayrshire breed owned by E. P. Prentice, near Albany.

Col. Le Couteur, of the isle of Jersey, from whose valuable essay, published in the transactions of the New York Agricultural Society, much of the above matter is condensed, further says:

"The Jersey farmer treats his cow with gentleness and care; it might be more correct to say his wife does so. On good farms she is usually housed at night after the end of October to the end of February, if heavy rain, hail, or snow prevail. It is deemed to be healthful to give a cow a short run daily through the winter, excepting in stormy weather. At this season, which is usually several degrees warmer than

in the mildest part of Devonshire; she is fed with a certain portion of straw, from 10 lbs. to 20 lbs. of hay, with about 10 lbs. to 20 lbs. of parsnips, white carrots, turnips, or mangold-wurtzel.

The small portion of grass which she may pick up in the winter, with the above quantity of food, enable her to produce a rich and well-colored sample of butter till within six weeks of parturition.

At this period, which is usually regulated to take place about the month of March or April, just when the cow, being in full milk, may soon be placed on the fresh spring pasture in April or May, she is an object of extreme care. On calving she is given a warm potation of elder, with a little powdered ginger. Quayle hints that pet cows are further indulged with a toast in their caudle.

The calf is taken from the cow at once, and fed by hand. It may be well to advise that on the first occasion of calving, the calf should be allowed to draw the cow fully; for no milking by hand will so completely empty the udder, nor cause the milk-veins to swell to their full development, as will the suction of the calf.

Some of the early meadows produce rich grass in March; but the general flush of grass, which comes on generally late in April, is the period when the Jersey farmer looks forward with anxiety. The cow is then tethered to the ground by means of a halter five or six feet long; this is appended by a ring and swivel to a chain which encircles her horns, closed by a ring and bar; the other end of the halter is fastened to a chain six or eight feet long, which is connected by a swivel and ring to a stout iron stake a foot long; this is driven into the ground by means of a wooden mallet. The cow having this circular range is compelled to eat it clean. She is usually moved thrice a day, and milked morning and evening, on many farms at mid-day also. Under this system, the writer has owned four cows that produced eight-and-forty pounds Jersey, or above fifty-one pounds imperial, weight of rich yellow butter per week in the month of May and part of June.

In very hot weather, in July or August, it is advisable to shelter the cow from the heat and flies; otherwise these tease cows to such a degree, by forcing them to run about incessantly, that they have no time for repose and chewing the cud; they, in consequence, afford much less milk or cream.

It was anciently thought that cream from the Jersey cow was too rich for making cheese. Mr. Le Feuvre, of La Hougue, who has a fine breed of cows tried the experiment two years since, and succeeded to admiration. It was made from the pure milk, cream and all, as it comes from the cow. It was found that the quantity of milk that would have produced a pound of butter afforded one pound and a half of cheese.

From the quantity of milk which produced a cheese of twenty pounds weight, the *drainings* of the curds and whey, on being churned, yielded four pounds of butter. This butter was of an inferior quality when eaten with bread, but was superior to any other for the making of pastry; it was peculiarly hard, and of excellent texture for such use in hot weather. The writer has tasted cheese from Mr. Le Feuvre's farm quite equal in quality to the richest double Gloucester.

On one or two farms besides General Foulzel's, butter is made from clouted cream in the Devonshire mode; but as this is not peculiar to Jersey, it is not noticed further than that ten pounds of butter are usually made in five minutes by this process. The usual way of procuring the cream is by placing the

milk in pans about six inches deep, the glazed, shallow earthenware having taken the place of the unglazed, deep vessels.

It is admitted that the richest milk and cream are produced by cows whose ears have a yellow or orange color within. Some of the best cows give twenty-six quarts of milk in twenty-four hours, and fourteen pounds of butter from such milk in one week. Such are rare. Good cows afford twenty quarts of milk daily, and ten pounds of butter weekly, in the spring and summer months. Butter is made every second or third day.

Lactometers indicate the degrees of richness, or cream, which the milk of any cow affords, with great nicety. This varies with different food. The mode is to fill the lactometer, up to zero with the first milk that is drawn from the cow in the morning; then, when the udder is nearly emptied, to fill a second lactometer with the residue of the milk, throwing a little out of the lactometer, to refill it to zero with the very last drops which can be drawn from the cow; these will be nearly all cream. The lactometer filled with the first milking only, indicate four degrees of cream, while that filled with the last milking forty degrees of cream. Then by dividing the sum total, forty-four by two, we have twenty-two degrees of cream, which a very good cow will produce; others so little as ten or fifteen.

Jersey butter, made when the cows are partially fed on parsnips, or white carrots and grass, in September and October, when salted and potted will keep till Spring, preserving as well as Irish butter, with a much less rank flavor.

(Col. Le Conte informs us under date of June 15, 1850, that yearling bulls of the pure breed would be delivered at Southampton, England, from £10 to £12, and a yearling prize heifer, at from £10 to £15—from \$48 to \$70 each.)

We can only say from our own observation, that at the great Southampton cattle show in England in 1844, and which from its convenience of access, to the isle of Jersey, had a good representation of their cows, that they attracted our attention more than any other stock on the ground. We have never seen, and cannot imagine any thing more perfectly neat and beautiful than the specimens we there saw. Not looking to weigh more than 400 to 500 lbs. when fat, with necks and head as graceful as a fawn, small, delicate tapering limbs, small thin ears, full and lively eyes, smooth crumpled horns; they looked as if they would not consume more food than a good sized sheep, and might be herded together in the same way. Youatt says "in England they are found only in gentlemen's parks and pleasure grounds, where they maintain their occupancy, partly on account of the richness of their milk, and the great quantity of butter, which it yields, but more from the diminutive size of the animals. It is thought *fashionable* that the view from the breakfast table or drawing room of the house, should represent an Alderney cow, or two, grazing at a little distance.

Fashion in this case seems to have taken a useful direction, and it is highly probable will be imitated to considerable extent in the United States, though for a different reason. The Alderneys will be daily attended to before breakfast, and the breakfast table

at breakfast time, which will suit better the *business* habits of Young America.

An instance is on record of a Jersey cow having produced 19 lbs. of butter per week, for three successive weeks. Many have produced 14 lbs. per week, but 10 lbs. per week during the Spring and Summer months appears to be most common in their native island.

Importation of English Cattle.

We have lately mentioned the purchase of several head of cattle and sheep in England by American breeders. In addition to these, we observe that the Mark Lane Express states that fifty head of the "choicest specimens of short-horned cattle" were shipped by the Crown last month for Philadelphia. It is said that twenty-four head of these cattle and a quantity of sheep, were the property of Mr. R. A. Alexander, of Airdrie House, Scotland, and were destined for his estate in Woodford county, Kentucky. For two of these animals, a two-year old heifer, and a yearling bull, he gave £525—or \$2,625.

Another vessel, we are informed, brings out the far-famed bull "Balco," bred by the late Mr. Bates, of Kirkclevington, and purchased at his sale in 1850, when one year old, by the Earl of Burlington, for 155 guineas. He has been used the last two seasons by Mr. Tanqueray, at Hendon, of whom he has been recently purchased by Col. L. G. Morris, the President of the New York State Agricultural Society, on behalf of himself and Mr. Becar, of New York.—These gentlemen have also purchased some highly valuable cows and heifers from Mr. Tanqueray, as well as the Hon. N. N. Hill and Mr. Harvey Combe; they have further selected some splendid South Down sheep from Mr. Jonas Webb, with a quantity of Berkshire, Suffolk, and Yorkshire pigs.

In connection with the above, are several choice Devon cattle, bred by the Earl of Leicester, destined for George Vail, Esq., of Troy, New York.—[Cultivator.

Introduction of French Merino into Western Pennsylvania.

We observe by one of our Western Exchanges that Dr. G. S. Hayes, of Allegheny, has imported during the present year, in connection with Solomon W. Jewett, of Middlebury, Vermont, 112 French Merino ewes and four bucks—of which flock Dr. Hayes received for his share *twenty-eight ewes and two bucks* costing him here something over *three thousand dollars*. They cost per head some twenty-five dollars passage from France to New York, and eight dollars a head from New York to Pittsburg.

These sheep are something finer than any before imported to this country—having been selected more with a view to the fineness of the staple than the largeness or weight of the fleece. The ewes averaged about 120 pounds weight, and the bucks 200 pounds. The Dr. sold this year's French Merino clip of wool, unwashed, at 50 cents per pound—being about equal to 70 cents washed. He sold a buck five months old this Spring, of his own raising, for \$250, and an interest of one-half in another, for \$210, after having had the use of him for two previous years.

These prices are high up in the figures, but are nothing remarkable for this breed of sheep. He keeps these sheep principally on his farm in Butler county. We trust he may have specimens of these sheep at the great fair at Pittsburg.—[Harrisburg Un.

Cows Holding up their Milk.

It is well known that many cows when they first come in, when their calves are taken from them, will hold up their milk, sometimes to such a degree as almost dry themselves before they will give it down.

"A few years ago," writes a correspondent of an English newspaper, "I bought a young cow, which proved to be very wild and when I took her first calf she would not give down her milk. I had heard it remarked that putting a weight on the cow's back would make her give her milk down. I accordingly drove her into a stable, got a bushel of grain and put it on her back. While in this position, she had no power, to hold up her milk, for it came down freely." After doing this a few times, and afterwards putting my hand on the back of the cow, it would give way and she would immediately give down her milk."

The rationale of this treatment appears to be that the weight counteracts the upward tendency of the animal's muscular action.

The Clinton Grape.

I have, before me, January 25th, a bunch of the above desirable, long-keeping variety, as fresh and perfect as it came from the vine. It has been cultivated in the vicinity of Rochester for the last twenty or twenty-five years; yet it is still but little known, although worthy of a more general cultivation on account of its hardiness and productiveness. It is the grape for the North, where no other variety ripens. Even with us, (latitude 42 deg.,) in backward seasons, this is the only variety that attains complete maturity. I would particularly recommend it to wine-makers as worthy of trial. My opinion is, that before many years it will be extensively cultivated as a wine grape. Judging from the character of its juice, the wine will require a longer time to ripen than that of the Isabella and Catawba, and will keep much longer than either. It succeeds well in all dry situations; and is entirely free from rot, to which the Catawba is particularly subject.

It is a matter of surprise that the wine-makers of the West, some of whom have been making such active search for native grapes, have not turned their attention to this variety. I have not seen it mentioned in any of their reports. I am informed, however, that it is now in the course of being tested there, and that a quantity of the grapes have been sent from this place to an eminent wine maker, to be tested as to their wine-producing qualities. We may, therefore, expect a report soon.

The vine grows rapidly, and is propagated easily, striking more readily from cuttings than any other variety I know in the whole catalogue of popular native and foreign sorts. The shoots are slender and wiry, ripening so well as to acquire great firmness, and hence it is so hardy that the severe cold of a northern winter never affects even the softer parts of the young shoots.

Wood—grayish brown and short-jointed; leaves—small and thin, sharply serrated, and unlike Isabella and Catawba, which are usually turned backwards, they have more of a concave form. Bunches—small and compact, resembling much the Black Cluster. Berries—small to medium, black, juicy, with considerable pulp, rather acid when first gathered, even though ripe. They improve by keeping, just as Winter pears will by house-ripening. It is a prodigious bearer, and ripens in equal situations two or three weeks before the Isabella.—[Horticulturist.

Prejudices of Farmers.

Extracts from an address delivered before the New Hampshire Agricultural Society, by William S. King, Esq.

But to come to the second prejudice of farmers. As a class they say, that *especial Education* is not necessary for them;—an education, adapted to their occupation as farmers, to teach them more than they now know, of their own business; thereby enabling them to improve upon the doings of their predecessors, as other classes of men have done;—an *AGRICULTURAL EDUCATION*, looking directly at their intended business for life.

The Shipwright, before he is able to launch upon the deep, those models of marine architecture, which, whether propelled by sails or steam, have alike carried our starry flag in triumph on the sea, has, in his youth, been apprenticed to a finished master of his craft; he has, so to speak, studied the alphabet of his trade under a competent teacher; and he has pored, dreary hours long, over models, and lines, and rules *laid down in books*. No one of my hearers supposes, that the improvements made in ship-building, whereby, even before the introduction of steam on the ocean, we had already diminished the distance to the English coast from our own, by full one-half in twenty years, are the result of accident, or of fortunate guess work. No! constant study alone enabled the builders to improve upon every model that was launched; until now, the work of our ship-yards, is the admiration of the world. It may be here added, as an argument for education, that the conceded superiority of our ship-wrights even over those of our mother country,—Noble Old England,—is universally and unhesitatingly attributed to the fact, that our ship-builders are more generally men of inquiring minds and of education in their business.

The Mason who rears your house walls, and spans the swift stream with the striding arch, has had his years of apprenticeship and education. Much of his knowledge must come from books, but he does not therefore despise it.

The Painter, who sketches with magic pencil, the glowing landscape, or "the human form divine," has prepared himself to execute those masterly touches, by previous care and study.

The Lawyer is educated with a steady view to his future profession.

The Physician acquires from books, and from observation, the knowledge of the healing art; that renders him a minister of mercy in our dwellings.

The Divine, whose errand is to warn the sinner to "flee from the wrath to come," and to comfort the parting soul, about to wing its way on a dim and untried journey, learns to understand and to expound the will of his Heavenly Master, by continued perusal of the writings of the good and learned.

All professions, all trades, all other occupations of men testify to the advantages of especial education; but the farmer is yet unconvinced. Men are not born with a natural knowledge of law, or of mechanics; so that after a little observation of the practice, they can take high rank in their respective occupations; but the farmer claims that he has, from youth; all the knowledge of his business that is necessary; and a few years of practice completes the education. If we allow that we merely desire to equal those who have preceded us, it may be that we can keep close to them, by walking in their footsteps; but the tendency of the age is to improvement;—the design of our Maker appears to be, that each generation of man should excel, in knowledge, its predecessor;—

but it is idle to expect improvement, where all are content to be imitators.

The object of an agricultural education is, undoubtedly, to make practical farmers; and here, at the outset, we stumble over a prejudice, as to what constitutes a practical farmer.

My purpose here, as all know, is not,—cannot be,—to ridicule my hearers. I have a too high respect for those who called me hither,—for those who now so kindly listen to me,—for the great subject that we are discussing,—for my own character,—to attempt to throw ridicule upon any whom I address. But you, yourselves, shall be judges of what yourselves declare to be a PRACTICAL FARMER.

To decide whether a stranger, who calls himself a farmer, has a right to the title, is not your first glance cast upon his clothes, to see if they be farmer-like; and your next upon his hands, to find they are hardened by manual labor. If a man, in a black broad-cloth dress coat, having hands fair to look upon, and uncalled upon by contact with the plow handle, presents himself to your notice, as a practical farmer, your politeness may or may not prevent you from laughing in his face, at the obvious absurdity of the claim; but you laugh none the less, in your sleeve, as you set him down for a fancy farmer.

Now, sirs, what right have you to deride this man's pretensions; and, off-hand, to pronounce that he is not a farmer, as accomplished as yourself, or even able to teach you what you have not yet learned, in your own occupation? It is because you consider that a practical farmer, is he, *and he only*, who labors with his hands; this would make them tough; and the necessities of his occupation would compel him to wear more homely apparel. Is it true, that this it is, and this alone,—*labor with the hands*,—*HARD WORK*,—that makes the practical man? Then is your hired help; who follows the plow, day in and day out; who shivers in the wintry stable, and sweats at the harvest, many an hour when you are occupied about other affairs, a better practical farmer than you; for he often works more. Then is the ox, that he drives, the most practical, for he wears rougher and tougher garments, has harder hands, and does more hard work than either of you.

Farmers! you greatly mistake the meaning of the word *practical*. Stand with me upon the quarter deck of a ship, as she strips for a battle with the storm. The bullying winds roar. The threatening sky descends and contracts. The angry waves lift up their heads. The tempest-tost bark, now piercing the sky with her trembling masts, now driving headlong into the yawning trough of the sea, is freighted with human souls. Do they not now, if ever, need the services of a practical sailor to conduct them safely through the envying perils? Who then is he, to whom all eyes instinctively turn, as under God, their only hope? Is it that stalwart son of the sea, whose strength is the boast of the ship's company;—who can "swim farther, dive deeper, and come up drier, than any man in the crowd;"—who can "hand, and reef, and steer;"—who can mount the rigging; with a squirrel's agility, and tie all the fast-knots, and sliding knots, that are the sailor's pride; and splice, or "lay a cable, with the next man;"—is this he, who is selected as the best practical sailor, to command the craft, in her hour of danger? Far from it, friends. The practical man, for the occasion, is yon dapper little fellow, with soft, white palms; sporting, mayhap, a seal-ring; and dressed, as if inclined to give to tar and pitch, and all other defiling substances, a wide berth. He it is;—this man, who has been educated for his position, and who directs

the labors of others,—he it is, who is the practical sailor.

If then, in the hour of danger, when death rages for his prey, and the yawning sea, shows the ready grave, men acknowledge the might of mind; why is it, that farmers will persist in undervaluing it, and set up sinews before it?

As we cast our eyes over the country, we see it traversed in every direction by roads of iron; mighty hills are demolished, wide valleys are filled up, and swift streams are spanned by viaducts. The neigh of the steam-horse wakes the echoes, far and near; as with eyes of fire and with breath of pitchy smoke, he rushes along his iron road with the roar and strength of the avalanche. Now if there are things that practical man can surely do, the piling of dirt and stones into a long narrow heap; and the digging down of banks of earth; and the hammering of iron, and the putting together of bolts and nuts, and plates, must be among them. But we do not give to the thousands of brawny workmen, who ply pick and spade, the honor of building the railroad; nor do we credit to the faithful smith, who obedient to directions, has wrought out a rod, and again hammered out a plate, the performances of the finished locomotive.

By and by,—as all now admit that a man may be a finished practical sailor, who does not defile his palms with pitch, oakum, or rattlin-stuff; and as one may claim to be a practical builder, rearing huge structures of granite, bridging rivers, and moving mountains, who does not harden his hands by the use of spade, pick, or crow; so we will acknowledge that a man may be a practical farmer, competent to the management of acres, who does not toil all the day long at the paw-tail. To farm well, as to direct any other operation well, the foreman, whether he be master or man, must thoroughly understand how things ought to be done; and then the proverb will be found to hold true of farming, as of most things else,—“the eye of the master is of more value than his hands.”

Scientific Agriculture is the cultivation of the earth by rule, and not by guess work. Indeed, when and where guessing ends and system begins, then and there is the birth, and the birth place of Science.

How many farms, gentlemen, within the reach of your observation, are, by this definition scientifically cultivated? On how many is the depth of the plowing gauged by the depth of the soil, the character of the subsoil, and a wise intention to render the fertile loam deeper year after year, inch by inch? How many farmers of your acquaintance, who enter on a farm with a soil three inches deep, undertake, as they well and easily might, to render it in twelve years, twelve inches deep? I would tell you here, that the experiments of thousands of farmers have proved that by thrusting the point of your plow one inch, or three-quarters of an inch deeper at each plowing and bringing to the surface so much of the inert subsoil, to be operated on by the atmosphere and to be benefitted by the manure year after year, you will to this extent increase your active fertile soil, and gradually create another farm, as it were, under your old one. But this would be scientific farming; and, consequently, in the opinion of too many farmers, mere nonsense; notwithstanding that facts, plenty as blackberries, confront them with evidence.

On how many farms in this State, or in any State, is the manure applied with sufficient knowledge of the component parts; and consequently of the wants

of the soil? On how many is the manure itself prepared and preserved, so that it retains all of its valuable constituents? Why, gentlemen, if one were to say that plants, to thrive, require food in certain proportions; and that if one of the necessary substances is not present in the soil, and is not supplied in the manure, the plant cannot thrive; and that in proportion as you have or apply the precise quantity of each ingredient necessary, so nearly do you come to getting the maximum crop,—you would set it down at once, in scorn, as scientific farming. And yet how else do you account for the fact, that one man grows a hundred bushels of corn to an acre and another but twenty? Why, clearly because the ground whereon grew the hundred bushels was naturally, or by scientific treatment, in a proper condition for corn bearing,—had in its womb all the necessary kinds, and enough of each kind of food, that the young and the growing plant required for its leaves, its stalk, its tassel and its ear. And how do you account for the fact, that you do not get an equal crop on the same ground the next year? Because the first crop has eaten up a good share of the food in the ground-pantry; and the third season, (if any man is silly enough to try corn on the same ground, without having supplied food by manure,) the third crop would find the shelves pretty well cleaned; and the progeny of that year would be pigmies.

On how many farms in New Hampshire is an accurate calculation made of the cost of growing different crops, so as to decide which is the most profitable to raise? On how many farms is an account kept of outlay and income from each field and each animal, that the prudent husbandman may know where is the mouse-hole in his meal-bin? This is not because it would be scientific farming. To be sure, a merchant who pretended to carry on an extensive business without keeping books, and without taking now and then “an account of stock;” or who would continue to deal in certain styles of goods, without knowing whether he was making or losing money by the operation, would be held insane. But surely that is no reason why a man who prides himself on being a plain practical farmer, should farm by arithmetic.

Do farmers hereabout, or farmers generally anywhere, attempt gradually to improve their seed by early and judicious selection; and by always planting the best, instead of reserving the worst for that purpose; or do they sell all that is fit to be sold, and keep the poorest for home use and for seed? This gradual improvement of seed, such as Mr. Brown, on an island in Lake Winnepegaukee has made in corn—known as Brown corn—and as many others have made in many plants, and fruits, and flowers, by the simple selection of seed, with judicious cultivation,—this smacks rather too much of science, for a practical farmer.

Scientific Agriculture recognizes the fact, that manures are economically applied, to exert their best influences, upon soils where water too much abounds; and recommends drainage. “And so,” say you, “does every practical farmer, who knows beans.” Well, perhaps every practical farmer does not “know beans,” or he would recognize them in a good share of the ready-burned coffee that he buys! At any rate, how different the operations of the systematic and of the guess-work drainer. The first discovers the secret springs, that supply the superfluity of water; and so locates his drains, and so to cut off the vein before it opens on the surface. While nine-tenths of your practical men dig ditches in the lowest part of the meadow, where the water stands:—

forgetful that an ounce of prevention is worth a pound of cure. This subject of drainage opens too vast a field for me to venture upon at this time.

This same rule of prevention causes your scientific farmer to do *all things in season*. He stirs up the earth between the drills of his crops, with the hoe or cultivator, to kill the weeds, before they attain to great size, and strength, and appetite. There is no such glutton as your weed. Like a sharper among honest folks, it defrauds the legitimate owner of what rightfully belongs to him. With coolest impudence it steals from the young and tender plant three-fourths of its food, and grows in consequence three inches to its one; Mr. Weed over-tops it; he bullies it, as it were after reducing its strength by starvation. By and by, he claims the ground as his own, and flourishes in undisturbed possession. He becomes seedy at length; establishes a large family, in good quarters to rob succeeding crops of potatoes and carrots; and is only uprooted and punished when he has about run the length of his evil course.

Agriculture is understood to express, not merely the cultivation of the land, but also all the operations incidental to it, or consequential upon it. Accordingly, we find science in the Stock-yard. The enlightened system, that prevails in the field, is introduced here. Acting upon the well-established rule that "like begets like," she selects fit moulds, and builds up breeds of cattle for the shambles, square and ponderous, like the lordly Durhams; and again for the yoke she prepares the beautiful and agile Devon; for the milk-pail she reserves families of each of these breeds, in which big udders and profuse secretions of milk are hereditary. For the churn she shows the gentle Jersey cow; seven quarts of whose milk will yield a pound of butter.

Among Swine, this same wise system,—a synonyma for science—has produced the Suffolk, the Middlesex, and other breeds, that run to fat, as naturally as a turtle-fed Alderman;—they eat, they grunt, they sleep their lives away, until they have attained to a very Lambertism of obesity; and then, with a gurgling in the throat they change into pork and are laid down in the barrel.

For the Farm Journal.

Poppy.

MESSES EDITORS:—

A short paragraph in the July number of the Pennsylvania Farm Journal on Poppy Oil, induces me to write these few lines, the result of my experience and knowledge.

The Poppy, *Papaver somniferum Oillette*, (French,) is very extensively cultivated on the continent of Europe, particularly in Flanders, France, parts of Germany, Switzerland, the Netherlands, &c., for its seeds, which produce a most excellent oil by expression, equal to that of Olives for eating, as well as for mixing with paints.

Two varieties are grown, viz: the white, *P. S. album*, which produces the best oil, and the purple, which produce the greatest quantity from the same quantity of seeds expressed. Both plants are easily distinguished by the color of their corolla, as the names imply.

The soil best adapted for the Poppy is a light rich loam, properly manured and prepared by good plow-

ing in the Fall, light cross plowing, and well harrowing in the Spring, and the seed then sown, March to June, at the rate of two ounces per acre, in shallow drills or rows very thin, the drills $1\frac{1}{2}$ to 2 feet apart; the seed rolled on land that does not bake; where it does bake, it can be kept light by strewing over the drills clean chaff or salt hay, where procurable, as this will keep the ground moist and favorable to germination.

As soon as the plants are 4 or 5 inches high, they should be thinned to one foot distance in the rows, and slightly earthed up, and kept clean through the season, either by a small plow or cultivator.

In July or August the seeds will ripen, which is known by the heads turning dark and dry, and they can be harvested by sending boys into the rows each with a basket, into which every head is shaken without breaking the stems; the ripe seeds being all loose will drop out through openings in the poppy heads, the unripe seeds will still adhere to the head and can be shaken out a few days after the first gathering. Should this appear too tedious work, the harvesting can be done by pulling up the stalks and putting them upright in bundles in the field; when they are quite dry, they can be shaken by handfuls over an empty barrel, or beaten on a sheet.

The produce in favorable circumstances, when every thing has been carried on with care and attention, will amount to twenty to twenty-five bushels of seed, which, on expression will yield about two and a half gallons of oil per bushel, and leave about forty pounds of residuum or cake, making almost excellent manure.

The Opium of commerce is made from the white Poppy, *P. S. album*, this being very extensively cultivated for that purpose, in Egypt, Turkey, Persia, India and China.

The manipulation of the Opium being a delicate and tedious process, requiring a large number of small hands, women and children, will prevent its being generally put in practice in the United States, on account of the dearthness and scarcity of labor.

Those who have at times made the trial, on a small scale, have obtained an Opium of very good quality.

The Poppy heads used by Druggists can be raised by sowing the seeds in gardens.

The seeds can be procured of me at 15 cents per ounce, at D. Landreth's, S. 6th street, or Paschall Morris & Co., 380 Market street, Philadelphia, at either of which places I can be found.

It will be perceived by the above that this plant cannot be raised with the same profitable results as the Rape, of which the statement I gave in the July number of the Pennsylvania Farm Journal, goes in evidence, besides which the Rape can be better raised here.

In 1822 or 1823, there was an Englishman in Salem county, N. J., who sowed Rape seed on a two

acre lot, broadcast, in order afterwards to thin it out by the hoe, as is practised in England with rape and turnips. During the Fall, his and his neighbor's cows broke in the field, and destroyed to all appearance all the plants, having eaten them apparently all down. Next Spring in going to look about that field he perceived that the greater proportion of the plants had come up again, so determining to give the field a chance, he repaired the fence round it thoroughly, and harvested that Summer, forty bushels of the seed, which he got crushed into oil, and then obtained three gallons per bushel, or one hundred and twenty gallons, which he sold at \$1.30 per gallon; at that time, thus realizing \$150 from the two acres, for the oil alone, after the disaster that befel it.

The seed of the Spring or Winter Rape can also be procured of me, at 25 cents per ounce, at D. Landreths, or Paschall Morris & Co., where I may be found.

F. A. NAUTS.

For the Farm Journal.

To Prevent Fly in Wheat.

MESSRS. EDITORS:—

The wheat crop, in many parts of our country having been more or less injured by the fly, permit me through the medium of your useful Journal, to recommend brining the seed for the ensuing crop. The benefit of this preparation has been accounted for by some on the hypothesis of the insect egg being deposited in the grain, and consequently destroyed by the soaking. Others assert the egg is deposited in the shoot, and if this be the case, the soaking of the seed can only deter the fly by the earlier and more vigorous start of the plant. But however operating, certain I am, from *experience*, that this preparation of the seed, has the desired effect. I gave this preparation of seed a trial many years back, when the fly had been very injurious for three or four years in succession, and my crops escaped, while those around, although in every other respect as carefully farmed and manured, were injured exceedingly. And, in a recent conversation with an old farmer from a distance, he observed, the wheat crop in his vicinity was much injured and straggled, but that his stood all erect, and had produced a full crop. This difference he attributed entirely to having thus prepared his seed, and added, he had never known it fail to prevent the fly injuring the wheat crop.

Farmers disposed to try the experiment, will accept the following hints.

I proceeded thus:—Having bored an inch and a half auger hole on one side the bottom of an open end hogshhead, I placed it on tréssels on the barn floor, high enough to put buckets under to receive the brine when drawn off. Then from below, drive in a spile, and place over its point in the hogshhead, an old tin cup, perforated with awl holes—then half

fill with water and a half bushel of salt. This done in the forenoon, toward evening the salt (frequently stirred) will be dissolved, when the wheat is poured in, filling to six inches of the rim, as this will admit of brine sufficient over the grain to supply the sinking of the brine by absorption. Early next morning the brine is drawn off, the grain spread on the floor, and pulverised lime (two or three pecks) spread over and mixed with it. This absorbs the moisture, and prevents the grains sticking together.

As seed prepared thus swells considerable, there is of course not so many grains in portion to bulk, and this makes it necessary in sowing the soaked seed, to grasp larger handfuls than when sowing dry seed, otherwise the seeding may be thinner than intended. E.

Chester county, Pa., Aug. 10, 1853.

For the Farm Journal.

Agricultural Progress in Delaware.

MR. EDITOR:—

I was much pleased to notice in a late number of the Farm Journal, that you had recently received some two or three hundred new subscribers in this "little State" of ours. Although, in some portions of our territory may be seen a decided improvement in the appearance and management of our farms, yet I would ask no better evidence of our progress in agriculture than the simple announcement that your valuable "Journal" has become a regular visitant to some three hundred farm houses in our Commonwealth.* Every good farmer will read, in fact, he *must* do so, to keep up with the improvements of the age; and when the day shall arrive—I hope it is not far distant—that every farmer in our State will have a copy of the Farm Journal, and will read its varied and valued contents with the determination to profit thereby, we shall give a character to our agriculture that would pass muster even in your famous county of Chester. In truth, "Chester county farming," as the phrase goes here, is coming quite into vogue among us—introduced by settlers from your county, who have been tempted to cross our borders by the low price of our land compared with yours.

We are indebted to your county, also, for many of our best implements, such as horse-rakes, corn-shellers, wheat-drills, &c., &c., which are sent to us from the manufactories of the Messrs. Pennock, at Kennet Square. This enterprising firm have opened an Agricultural Warehouse in Wilmington, which will be the means of a more general introduction of superior implements; an improved system of farming will soon follow, as a matter of course.

[*We have over three hundred subscribers in NEW CASTLE COUNTY alone, which rather puts to the blush some counties in Pennsylvania we could mention.

ED.]

But, it is the introduction of *Guano* that is working out an agricultural revolution in our Commonwealth. Many farms that were considered *worn out* have been entirely paid for by the first crop of wheat, after the application of *Guano*. And in several instances within my knowledge, farms that five years ago you could scarcely give away, are now worth twenty-five dollars an acre, and increasing yearly in value.

I have no hesitation in saying that, if the supply of *Guano* holds out, and the use of it by our farmers continues to increase in the same ratio during the next five years that it has for a year or two past, the real estate of our Commonwealth will be worth five times as much as it is at present. Even down in "Sandy Sussex," where, as the story goes, the sand is so thick that the farmer, after he is done plowing in the evening, has to hang his plow on the fence in order to find it next morning, there are some signs of improvement; nevertheless, when the *Farm Journal* finds its way down there—like a good missionary in heathen lands—it will find an ample field for labor in dispelling the "darkness that covers the land, and the gross darkness the people,"—*agricultural* "darkness," I mean, of course. But, more anon.

Yours, &c.,

A DELAWARE FARMER.

New Castle county, July 20, 1853.

For the *Farm Journal*.

Cross-Drilling Wheat.

NEWARK, Del., Aug. 16th, 1853.

J. LACEY DARLINGTON, Esq.

Dear Sir:—As the time for seeding wheat is fast approaching, I feel it my duty to give some hints to your numerous readers of the *Farm Journal*, on the raising or growing of this crop.

I last year drilled twenty-five acres of land in wheat, nine acres of which was clover sod, the balance sixteen acres consisted of oats stubble.

I will now give to your readers the method in which I planted my grain. I plowed my sod ground about the middle of August, plowing under a heavy crop of clover; the depth of the plowing about eight inches. I then let it remain untouched until the 12th of September; then I broad-casted about four hundred pounds of No. 1 Peruvian *Guano*, per acre, on the top of the plowed ground, and used the heavy spike harrow over it three times, then put on a heavy roller, which finished it for the drill. I commenced drilling on the 18th of September, drilling it, both ways, or what would be termed cross-drilling; sowing each time $1\frac{1}{2}$ bushels per acre, and making $2\frac{1}{2}$ bushels per acre. This seems heavy seeding, and so it is, but the result was a good yield, I averaged from this field about 47 bushels per acre.

Field No. 2, oats stubble, 16 acres, I plowed in Ju-

ly, depth 9 inches, and harrowed it once to level it. I then plowed it again in September, in lands the usual width six steps, plowing my manure under; there being about eight acres of this field composted, the balance guanoed, 300 lbs. to the acre, plowed down as was the compost. I then harrowed it three times with a heavy spike harrow, and rolled as before, which made it ready for the drill. I then commenced drilling it, but the one way, sowing 2 bushels per acre, and finished this field on the 23d day of September. The yield from this field was good, average per acre, about 31 bushels, which may be considered a good crop.

But I feel a strong disposition to recommend to my fellow farmers, the principle of drilling both ways, as I have tried it for the last three years, and find it to yield from 7 to 10 bushels and more, per acre, on the same land and in the same field.

In conclusion, I would again recommend drilling twice, one bushel each time, and the free use of *Guano*—one hundred pounds for the benefit of the fly, and three hundred for your self, and I will insure a good crop, if tilled as above stated.

I am sir, your obedient servant,

JAMES H. RAYE.

For the *Farm Journal*.

Guano, Nitrate of Soda, &c.

TO THE EDITORS OF THE *FARM JOURNAL*:—Two years ago I mixed 200 lbs. of *guano*, (for which I paid \$5,) with 3 bushels of plaster, and put it round the stocks on four acres of corn, after it had got up, and previous to being harrowed. I found the corn more vigorous than that which had no *guano* and only plaster, though on the same quality of soil; the cobs were larger, and I believe I was repaid for my outlay of five dollars.

This year I have mixed 120 pounds of nitrate of soda, (which cost me \$3 90,) with 3 bushels of plaster. (I had the nitrate of soda ground in the mill like plaster.) I put it also in the same manner as before, on four acres of corn. During the dry weather we had in the Spring, I found the nitrate of soda had no effect, but since we have had copious rains, the effect shows itself most wonderfully. The corn is dark green, and the growth vigorous, more so than the effect of the *guano* was. I expect to be paid over and over for my outlay, \$3 90.

I communicate you, sir, this fact, with the request to be so good to induce the Philadelphia merchants to import this article, the nitrate of soda, more freely. I have been informed it is found in abundance in South America, and can be imported by the cargo at \$35 a ton. It is the nitrogen the grand desideratum to the growth of plants. It is my opinion it will supersede the *guano*. It is in a pure state, no adulteration or fraud can be practised with it, as much as *guano*. According to Mr. Paschall Morris,

Peruvian guano contains only forty-one per cent, really valuable salts, the rest is animal matter, water, magnesia and lime. Magnesia and lime we can apply to our land abundantly with a trifling expense. Our lime contains 30 per cent. of magnesia; therefore for those 41 lbs. of really valuable salts we have to pay \$3 50, and then run the risk to receive an inferior article, the Chilian guano, which only contains 20 per cent. really valuable salts.

The chemist has unveiled much of the mystery of vegetation; the farmer ought to profit by it; it enables him to prepare his fertilisers, and not buy those nostrums when much of their component parts may be worthless.

30 lbs. of bone dust, at one cent per lb.,	30
30 lbs. of of plaster, at half cent per lb.,	15
30 lbs. of nitrate of soda, at three cents per lb.,	90
10 lbs., carbonate of amonia, at 18 cents per lb.,	1 80
	<hr/> \$3 15

(The plaster will fix the carbonate of amonia.)

Such a mixture, I believe, would be worth 150 lbs. of guano. We may not receive so much amonia but far more nitrate, and more phosphate, so necessary to our soil, and be sure to have a pure and unadulterated article.

I also take the liberty to direct your attention to induce the Philadelphia salt merchants to import some rock salt, or salt in blocks. I give salt in that state to my cattle. It is so convenient to have a lump in the trough; the cattle can lick it when they feel an appetite for salt. But it is too high in price; I have to pay \$1 50 per 100 lbs., in Philadelphia, and scarce to be got. I think it could be imported for half that price. It would then become in general use among farmers.

H. SHUBART.

Bethel, Berks county, Aug. 1853.

Having much to our regret, missed seeing the fine animals alluded to below, which recently arrived in Philadelphia, per ship Crown, we are much obliged to our friend, Aaron Clement, himself one of the best of judges, for his description and communication.

For the Farm Journal.

Importation of Short Horn Cattle, Sheep, &c.

TO THE EDITORS OF THE FARM JOURNAL:—

I have been unable hitherto to give an explicit account of the recent importation of live stock from England, for Kentucky, which has excited some interest in the agricultural prosperity and improvement of this country. The Western people seem as much in advance of us in agricultural enterprise, as we claim to be in advance of them in commerce and manufactures.

This valuable part of the cargo of the ship Crown, from Liverpool, estimated in the Mark Lane Express, of London, at £5000 previous to shipping; con-

sisting of 40 head of cattle, 31 sheep, a horse of the Cleveland Bay stock, and some Suffolk pigs, is the property of R. Atchinson Alexander, Esq., of Scotland, (who has a large estate in Kentucky,) and some Kentuckians, associated for the purpose of importing a number of fine animals to cross with their own stock.

A sight of the animals showed at once the care and judgment exercised in their selection, and the condition in which they landed, proves that no care or attention had been wanting on the part of the shippers to insure their safe arrival in this country.

It was remarked by many persons, that though a little stiff, they had more the appearance of animals coming from fine pasture, than from a long voyage.

It was much regretted that Mr. Garrard, the agent of the Kentucky importing company, was necessarily in such haste to get this stock home, as prevented many amateurs from getting a fair sight of them. Several of the young bulls excited great admiration. One bought of Lord Feversham, and others of Messrs. Ambler, Fawkes, and Hopper, attracted most particular attention, and were greatly admired, as well as some splendid heifers, from the herds of Messrs. Booth, Ambler and Townly.

The horse was much esteemed for his fine points, and beautiful action. And the sheep may be regarded as the best that could be selected from the most reputed flocks in England.

Mr. Alexander having allowed his stock to remain here some days longer, I have had a better opportunity of examining them particularly.

He has five young bulls; two of them are not in as good condition as the others, but they show many fine points in common with them. They are both from the herd of Mr. Fawkes, whose stock was principally derived from the herd of Mr. Whitaker, so justly celebrated as a breeder of Short Horn stock. The other three bulls are in fine condition, considering their recent voyage, and are remarkably fine animals. My favorite, is "2d Duke of Athol," two years old next September, descended from Mr. Bates. Dutchess 54th, by Mr. Booth's Lord George, a bull of the highest reputation; he is large for his age, of a red roan color, with fine head, deep brisket, round and deep in the ribs, straight on the back, with quarters properly full and ample. Indeed, from whatever point he is viewed, it would seem difficult to find a defect. His horns, which are strong, might be thought too much so, by the admirers of small and delicate horns, but there can be little doubt of the truth of the opinion held by most of the breeders of England, that a strong horn denotes strength of constitution, and in the case of this bull, the horns are not so large as to be objectionable. To his symmetrical shape, he adds the quality of being a first-rate handler, a point frequently too little attended to in this country.

Lord John, somewhat older than 2d Duke of Athol, may also be considered a very fine animal. He is a pretty roan, of fine size and shape, and had I not seen the other bull first, I should have been quite satisfied with him, as he combines almost all the points required in a bull, and some think him equal to the other.

The remaining young bull, is called Fantichina, bred by Mr. Fawkes, he is, just a year old, and would generally be considered a red and white in color, but upon examination, he approaches a roan; he has a finished shoulder and brisket, straight back, good barrel, fine hips, deep in the flank, and fine in the head and neck.

Mr. Alexander's lot of nineteen cows and heifers, with one or two exceptions, may be said to be very fine. I shall describe three or four favorites. The two cows which pleased me most were a red and white, from Mr. Wiley, of Brandy, Yorkshire, bred from stock obtained from Messrs. Mason and Colling, and a roan from Mr. R. Bell, Morbro' Hall, Lancaster, bred by him from Bates' stock, now the favorite in England. It is somewhat difficult to choose the finest heifer, as this depends on the taste of the chooser,—but I think most good judges would perhaps prefer a red heifer, one year old, coming also, I am informed, from Mr. Bolden's herd, combining the blood of the old rival breeders, Bates and Booth. It is difficult to find a fault in her shape, and in some points she excels any heifer I have seen, more especially about the flank and quarter. After her I should place the heifers from the herd of Mr. Tanquerly, near London; one, a two year old past, the other a little under two. These heifers are fine specimens of two different styles of animals. Minerva 3d, the older of the two, being finer in her bone, and her proportions than Joyful, who is larger, with more appearance of flesh,—each, however, is a picture such as a breeder of fine stock must admire. I have not time to go further into detail, but will content myself with saying, that the introduction of so many fine animals into this country must prove highly advantageous to the community in general, as well as to the breeders of Kentucky, and I hope the gentleman importing them, may be as successful in getting them to their destination as they have been in selecting them, and getting them across the Atlantic.

Respectfully yours,

AARON CLEMENT.

Philadelphia, Aug. 1st, 1853.

For the Farm Journal.

Clean Seed.

MR. EDITOR:—

As seeding time is at hand, I would call the attention of farmers to the importance of sowing *clean seed*. There are still a few who believe that wheat degenerates into "cheat." A writer in the New York Tribune, in describing the crops of last

season in Illinois, said that some of their wheat turned into cheat, in consequence of being sown on flat land, and the hard Winter. The farm on which I live, was full of cheat when it came into my possession. I have been very careful never to sow any thing but wheat, and the result is, I never reap any thing but wheat in harvest time. Formerly I was accustomed to get about one-half cheat in my Fall crops, but since I have cleaned my seed wheat carefully, I get no cheat in the worst kind of crops.

L. S. REIST.

Locust Grove, Lancaster county.

Pennsylvania State Fair.

Our readers in all sections of the State, will bear in mind, that before another issue of our paper, the third Annual Exhibition of the State Society will have passed by. It occurs at Pittsburg on the 27th, 28th, 29th and 30th of September. Premium lists and arrangements for the exhibition, will be found in our two last numbers. We hope and expect it will surpass both of the preceding ones. The main reliance of course, must be on our friends west of the mountains, but if the accommodations on the transportation lines are *satisfactory*, and not otherwise, there will doubtless be also a representation from this section of the State, which now contains some of as good stock, as is to be found in the Union. We regret, that previous to our Journal going to press, we should have received no information about provision for articles going to the fair, or price of excursion tickets for passengers. We presume every thing of this kind will be duly attended to. In New York, the managers of their approaching fair at Saratoga, have obtained from the proprietors of all their public houses, the prices to be charged by them respectively, for accommodation during the fair. This enables visitors beforehand to determine the probable cost of expenses, and avoids danger of imposition. It is a good move.

Chester County Agricultural Exhibition.

The first exhibition of the above society, now fully organised, after "a suspended animation" of several years, will be held at West Chester, on the 16th and 17th of September. Arrangements are in progress, (a suitable lot within the borough limits having been secured,) to afford every accommodation to exhibitors of stock, implements, and farm produce. A ploughing match will also be held near the show grounds, to which ploughmen and manufacturers are invited. The general feeling through the county is, that there must be no mistake this time, and if our friends in adjoining counties, wish to see some of the very best cattle, sheep, hogs, and poultry in the country, which have been bred and raised by our Chester county farmers, we hope they will favor us with their company on the occasion. Dr. Emerson, of Phila-

delphia, has consented to deliver the address, which we are confident will attract an attentive auditory.

The Horticultural Exhibition will be held at the same time, in the large hall of the society.



McAvoy's Superior Strawberry.

Through the kindness of our friend Dr. Brinckle, we are enabled to present the above engraving from an original drawing of this celebrated variety. It received the premium of \$100 offered by the Cincinnati Horticultural society, and was pronounced by them, after two seasons trial, as superior to Hovey's Seedling, and any other variety that came under examination of the committee. Its usual sexual character is pistillate. Fruit very large, roundish ovate, occasionally slightly necked, deep brilliant crimson; seed crimson, sometimes yellow, set in indentations, not deep, except in the largest specimens; flesh red; flavor exquisitely fine; quality "best."

So far as tried in this latitude, it sustains its high character, and will be sought after for general cultivation, being a very prolific bearer. Dr. Brinckle (and there is no higher authority,) writes us, "taking all its qualities into consideration, it is probably the most valuable strawberry we have."

William Parry, a practical strawberry grower of New Jersey, and who cultivates many varieties, also states in our last number, that "McAvoy's Superior yielded a larger crop of large sized berries than any other."

It is surprising, that in the vicinity of Philadelphia, where the demand for strawberries is very great, and yearly increasing, so little attention is paid by farmers to their culture. With the exception of a few gardeners near the city, the supply is nearly altogether derived from New Jersey. It is stated in our last number that one farmer, in Burlington county, sold over \$1100 from less than three acres. Compare this with the profits of the ordinary course of farming, as detailed by our correspondent C. B., in the numbers of his Agricultural Review, and as we have often before urged, it will be found high time for farmers in Pennsylvania to look about them, and

adapt their business to the changes induced by the great increase of population in our large cities, and the facilities of travel and transportation offered by our numerous railroads. Not only strawberry, but fruit culture generally, will be found far more profitable over a large section of Pennsylvania, than grazing or grain growing. In Cincinnati, during the selling season, the sales of strawberries will average three hundred bushels per day. A single cultivator carried to market one hundred and twenty bushels per day, for eight or nine successive days. We do not know the price there, but in Philadelphia, fine strawberries will command very readily, 15 to 18 and 20 cents per quart; at 15 cents it will reach nearly \$5 per bushel.

What is true of strawberries is equally so of other fruit, fine apples, pears, plums, &c. There is an absolute scarcity or shortness of supply to demand, taking an average of one season, or of several seasons. Occasionally there is a glut of wormy, inferior, unwholesome fruit, but fine varieties, and fair, good sized specimens, will always sell at amply remunerating prices. The present season, there appears to be a general failure of the apple crop in Pennsylvania, and the supply must come from the Eastward. This is said not to be our fruit year, a distinction not recognized in New York State, where fruit growing is made a part of the regular business of the farm, and the orchard receives its proper attention, like corn, wheat and potatoes. A disposition to overbear one year, and the necessary exhaustion of the soil in consequence, is counteracted by the application of specific manures, and thinning of the fruit.

The largest and most profitable orchard, probably in the country, that of Pell's, consisting of three hundred acres, up the North river, is thus managed, and there is nothing like any regular failure of the crop.

Improvement in Lime Burning.

George W. Feering, Esq., of Lehigh county, in connection with a couple of gentlemen of Northampton county, have the patent for a new lime-kiln, of a novel construction, which possesses such decided advantages over every other kind of kiln as to promise an entire revolution in the lime-burning business. It is thus described. The kiln is lined with fire-brick, and is 31 feet high, with a hopper on top, capable of holding a large quantity of stone, which keeps falling down into the kiln as fast as lime is drawn out below. It will burn, on an average, 300 bushels of lime per day. Wood is used in burning, and three or four pieces of ordinary hickory or oak wood will last half an hour. Two cords of wood will burn between 200 and 300 bushels of the best lime. The lime is drawn off every twelve hours. The kiln is the invention of a Mr. Schroeder, of Rochester, New York. Joseph Yeager, in Lower Saucon township, has one in operation on his farm.—[Philadelphia Dollar Newspaper.

Jonathan Dorwart, of Lancaster city, has a hen of the Cochon China variety, which, it is stated, has laid 140 eggs in as many days.

Agricultural Fairs.

Mifflin county, to be held at Lewistown, 13th and 14th of October.

Jefferson township, Fayette county, to be held near Brownsville, 5th, 6th, and 7th of October.

Greene county, to be held at Carmichaels, 12th, 13th and 14th of October.

Lawrence county Agricultural and Horticultural Society, to be held at New Castle, Pa., 21st and 22d of September.

The Executive Committee of the Northumberland County Agricultural Society, have resolved to hold their fair at Milton on Tuesday and Wednesday, October 18th and 19th.

Tioga County.

The spirit of improvement, now visible among the farmers, in every section of the State, we observe, has reached Tioga, one of the best of our border counties, rich not only in soil, but in her coal, iron, and raw materials for manufactures. A call is published for a public meeting at Wellsborough, her county seat, on the 5th of September, to form a "county agricultural and mechanical society." We wish it the best success.

Burning Lime.

The article in our last number, by our able correspondent, G. B. Browne, on burning lime, and altering the construction of the kiln, to obviate the difficulty found by builders, in the use of coal burnt lime, has attracted some attention. We are authorized to state, he is prepared to give such directions to practical mechanics, as will enable them to construct kilns on this improved principle. Address him at Gwynedd, P. O., Montgomery county, Pa.

Mowing Machines.

At the Mount Holly, New Jersey, trial of reaping and mowing machines, held July 2d, the premiums were awarded as follows:

To Ketchum, for the best mower, \$10.

To Manny, for the best reaper, \$10.

To McCormick, for the best mower and reaper combined, \$15.

To Hussey, 2d best, do., do., do., \$10.

BOOK NOTICES.

Miner's Domestic Poultry Book,

A work with the above title was lately issued from the press, which, on examination, we find to embody a very large amount of valuable information, and history of all the known breeds of poultry, brought down to the present time. It is illustrated with one hundred engravings, also copious directions as to their rearing, feeding, management, diseases, best

method of fattening, mode of caponizing, construction of poultry houses, chicken coops, preservation of eggs artificial incubation, &c. It is a most comprehensive little work, and the design appears to have been to bring before the public, in a cheap and portable form, all the information, and practical experience of the best poultry breeders in our country. Numerous letters from them, as well as extracts from standard works, are interspersed through the work. The history of the different importations, into the United States, and the characteristics of each breed, will be very opportune information at the present time. We think it is just such a work as is wanted. To give an idea of the importance of the subject, the preface states, "the quantity of eggs consumed daily in the city of New York, is not less than 400 barrels, or 400,000 eggs. Some of the large hotels in that city use about 200 dozen per day. In a year the enormous number of 146,000,000 eggs are sold there, worth at least \$2,000,000. The sales of poultry and eggs amount to about \$3,000,000. The value of poultry in the whole country, according to the late census, is \$15,000,000.

The price of the above work, in paper covers, is only fifty cents. It may be sent through the mail, and can no doubt be obtained at many of the agricultural warehouses and book stores. J. W. Moore, Philadelphia, is the publisher.

Phelps' Bee Keeper's Chart.

This is one of the series of Saxton's Rural Hand Books, the indefatigable publisher of New York, is in a cheap portable form, with paper cover, and can readily be sent by mail, price 25 cents. It goes over the whole subject, in a condensed practical form, and is a cheap and useful treatise.

LADIES' DEPARTMENT.

For the Farm Journal.

Bement's Compound.

I fully agree with my Westmoreland sister, Mr. Editor, that the lady readers of the Farm Journal are entitled to a page or two of its columns every month, for the discussion of *within-door* matters, which, in my opinion, are as fully important, and go quite as far towards securing domestic peace and happiness, as your "improved systems of farming."

Our interesting "lords," I rather imagine, would find it a dull world to live in, unless we racked our brains, and bodies too, to keep them in good humor by a plentiful supply of "creature comforts." If then, in this age of progress, anything new should turn up that will mitigate our household troubles, or add to our domestic comforts, why not let us have them in the columns of our own *Pennsylvania Farm Journal*, Mr. Editor, that your lady readers, from the Delaware to the Allegheny, may be benefited and instructed.

To set a good example, therefore, I will ask a place in our department for a New York receipt that I have tested for some years past, and I find very useful and convenient. It is a substitute for yeast in making biscuit, muffins, buckwheat cakes, &c., &c., and is far preferable to saleratus, or any of the "yeast powders," advertised in the shops. This "compound" is the invention of C. N. BEMENT, of Albany, a distinguished agriculturist and author, and now proprietor of the Albany city steam mills.

I happened to be visiting a friend on the Hudson, a few years since, and became so much interested in the very fine biscuit, corn-bread, &c., which daily graced her table, that I could not rest easy till I became initiated in all the mysteries of their production. I noticed, that in thirty minutes from the time she entered the kitchen, the biscuit were made up, baked, and on the table. This is one of the very desirable characteristics of the "compound." For, how often, does "company" drop in on us unexpectedly, about tea-time, and perhaps, when we have nothing but stale bread in the house. Then it is that the compound can be brought most advantageously to the rescue, and in half an hour, biscuit may be laid before our guests, as *light*, wholesome, and as good, in every respect, as can be made from yeast or otherwise.

In using this compound, great care must be taken to mix it thoroughly with the dry flour. This is best done by shaking it through a small sieve over the flour with one hand, while the flour is stirred with the other, and then passing the mixture once or twice through the sieve. Much depends on this operation for its success.

TO MAKE BISCUIT.

Take one quart of flour, four tea-spoonsful of the compound, a little salt; mix thoroughly as above; then add one pint of sour cream and knead into dough, not very hard. Bake in a quick oven, not over twenty minutes. If sour cream cannot be had, rub a lump of butter the size of a hen's egg into the flour, and pour in a pint of milk, as a substitute.

BUCKWHEAT CAKES.

To three pints of buckwheat flour put four tea-spoonsful of the compound, and a little salt; mix by sifting, as for biscuit; make a batter and commence baking as soon as thoroughly mixed. One great advantage in this method is, that the batter is ready for baking as soon as it is made, and the cakes are sure to be light. The cakes will brown better by mixing a little corn meal, and substituting milk for water in mixing.

MUFFINS AND CORN-BREAD

Are made in the usual way—merely substituting the compound (by mixing with the dry meal as above,) for yeast, and baking as soon as made up.

I ought to state, Mr. Editor, for the information of your readers in this neighborhood, that the compound was ordered at my request, by one of your West

Chester merchants, Mr. Wm. P. Townsend, and is for sale at his store. It is one of those little conveniences in our domestic economy that has only to be known to be appreciated, and as such I recommend it to the notice of every good

HOUSEWIFE.

Chester county, Aug. 15.

How to do up Shirt Bosoms.

We have often heard ladies expressing a desire to know by what process the fine gloss on new linens, shirt bosoms, &c., is produced, and in order to gratify them, we subjoin the following receipt:

Take two ounces of fine white gum arabic powder—put it into a pitcher, and pour on it a pint or more of boiling water, (according to the degree of strength you desire,) and then having covered it, let it set all night—in the morning, pour it carefully from the dregs into a clean bottle, cork it, and keep it for use. A tablespoonful of gum water, stirred into a pint of starch made in the usual manner, will give to lawns—either white or printed—a look of newness when nothing else can restore them after washing.

For the Farm Journal.

Women's Rights.

DELAWARE COUNTY, Aug. 3d, 1853.

MR. EDITOR:—

I trust that the dish of sentiment and poetry, that you have cooked up for your fair correspondent of Westmoreland county, is intended for her alone, and if she is willing to march up to the cannon's mouth, to maintain the rights of women, to be a satellite around the dinner pot, mending stockings, &c., which appears to be your idea of "Woman's Rights," I have first to learn that man has ever denied her those rights; but when a woman has done up all the chores, why may she not as well regale her mind, on the pages of an Agricultural or Horticultural work, as set down to sentiment or poetry? What kind of mothers would such women make, for *man*, whose intellect is to control the destinies of a nation.

Does not your Journal advocate high breeding for cattle and stock? Is it not important that the *female animal* should equal the male? Will any stock raiser attempt to raise from degenerate and inferior mothers? and if they do, what is the consequence? What folly to suppose man is an exception to the great law of nature.

If you must have a "Ladies' Department," appeal to woman as a reasonable being; that she shall insist upon high intellectual culture, high physical training, to fit her for her high destiny as *mother* of man, not his servant and toy.

Tis to be hoped the ladies of your own county have minds to appreciate something more than sentiment, poetry, or cooking receipts, all well enough in their places, but if they must have the first two, there is no lack of trashy publications filled with them, without introducing them into the Farm Journal.

In our little county of Delaware, there are women who subscribe to your Journal, and many who read it, to whom the articles on lime, guano, analysis of soils, root crops, grain, horses, cows, pigs, poultry, horticulture, &c., are read with interest.

Knowing and respecting Dr. DARLINGTON, we should have liked to have escaped ridicule from his son, on the subject of "Woman's Rights."

Respectfully,

One who knows her rights, and feels her wrongs.

ANNA G. BROOKFIELD.

"Women's Rights" are safe in that "little county."—*Ed.*

Work for the Month.

FARM.—The three important operations, during this month, are seeding wheat crop and securing corn and potatoes. Thorough preparation of the ground, by twice ploughing and frequent harrowings, to produce fine pulverization, and make even and smooth work for the drill, are important matters, in addition to the use of suitable manures, for obtaining a fall crop of wheat, no less than the successful growth of grass seed, often here more important than the other. To give an idea of what the wheat crop requires, we give an analysis of the grain and straw organic and inorganic constituents:

	Grain.	Straw.	Organic constituents of Wheat in 100 parts.
Potash,	23.72	12.44	
Soda,	9.05	0.16	Water, 15
Lime,	2.81	6.70	Harsh or woody fibre, 15
Magnesia,	12.03	3.82	Starch gum and sugar, 55
Oxide of iron,	0.67	1.30	Gluten, albumen, &c., 10 to 20
Phosphoric acid,	49.81	3.07	Fatty matter, 2 to 4
Sulphuric acid,	0.24	5.82	Saline matter, 2
Chloride,		1.09	
Silica,	1.17	65.38	

From the above it will appear, that manures rich in nitrogenous matters are required, and in which our ordinary barn-yard manure is particularly deficient, the ammonia having either been dissipated by exposure to air, or carried off by the liquid drainings of the yard. It also explains why Guano, containing a large percentage of ammonia has had better effect. Of the mineral ingredients, potash and phosphoric acid in the grain, and silica in the straw, constitute a large proportion, and should be supplied to the soil if deficient. From the 15th to the 20th of September is considered the best period for sowing in this section. Use none but clean seed, and refer to article in present number about brining it previously, 1½ B. or 5 p'ks to acre, if drilled in, is ample. Corn should be cut up at the ground and tied in shocks, at the top, with a straw band, there to remain till ready for husking. If shocks are too large, the fodder will be injured by heat, &c. Topping corn in the field is highly injurious to the grain, in respect to weight and quality, and should be discarded by every farmer.

In gathering potatoes, select for seed such varieties as are wanted, as they can be more readily distinguished when fresh, and store them away by themselves. Examine and clean out corn-cribs, granaries, &c., and make them rat-proof before putting in the new crop. Haul weeds and refuse stuff into pig-pens, barn yard, and compost heap. See that the mouths of drains and ditches are kept open and in order. Replenish the rock salt in field for cattle and sheep. Make arrangements to reconstruct the farmer's laboratory, the barn yard, so as to save liquid from running away. We can think of no better outlay of money, than a manure shed through the centre of the yard, where the manure should occa-

sionally be collected through the winter, and composted with soil, weeds, &c. It might be opened on two sides, so that cattle could run over it, and would also answer for shelter for them.

FRUIT ORCHARD.—Budding may still be attended to, at least with apple and peach trees. Examine trees to see that they are not injuring or cutting into stocks or buds. Manure, plough and subsoil ground intended for fall planting of orchards. Select your list of varieties, and have them ready for use. Grape vines should have superfluous wood thinned out. Cut out decayed berries from bunches. Pears are best ripened in the house, and should be gathered so soon as they show any signs of turning color.

Strawberry beds should be thoroughly weeded out and kept clean during the fall; for new plantations the spring is preferable. Apply wash to bark of trees if not previously done; cut out blighted limbs.

VEGETABLE GARDEN.—Within the first ten or twelve days in this month is the proper time to sow cabbage seed for transplanting into frames, to keep through winter. The season is so uncertain that there is danger of being too early as well as too late. If the fall continues warm, so as to continue their growth, it must be checked by one or two transplantings. Early and Large York and Early Sagar-loaf, are the best for this purpose. Prickly-seeded Spinach should also now be sown for winter and spring use, in ground heavily manured, and at two or three periods in the month. Sow in drills ten inches apart, and cover with the rake. When the plants are up, thin out to three or four inches. The early sowings may be used in the forepart of winter. Transplant Endive and sow Radish seed, Corn Salad and Winter Cresses. Lettuce seed should also now be sown, to transplant into beds next month, to remain over winter. Brown Dutch and Hardy Cabbage are the best varieties for this purpose. Earth up Celery as it progresses in growth, on dry days only. Gather all seeds as they ripen, also medicinal and pot-herbs. New plantations of the latter may now be made by division of the roots. Look over cucumber vines and gather for pickling before they are injured by frost.

From the middle to the last of the month, sow Cauliflower seed, on a rich piece of ground, finely prepared, and rake the seed in carefully. If the weather is dry, water before and after they are up, and in the course of a month or six weeks, prick the plants carefully into beds, about three inches apart, and cover with glass as for winter cabbage.

Onion seed, to stand the winter, may also now be sown. Hoe turnips and cabbage and keep the ground clear of weeds, removing all offal from the ground as each crop is gathered, and haul to compost heap.

Pennsylvania Horticultural Society.

AD INTERIM REPORT

Of the Fruit Committee, for July and August.

PHILADELPHIA, August 15th, 1853.

To the President of Penna. Hort. Society:—

The Fruit Committee respectfully Report, That since the June Meeting of the Society, the following specimens of fruit have been submitted to their examination:—

From Mr. Tague, of Burlington—Fine specimens of the *Moyamensing Strawberry*. A description of this valuable variety was given in the last ad interim report.

From the Rev. S. C. Brinkley, Wilmington, Del.—Specimens of three varieties of Cherries:—

1. *Buttner's Yellow*—rather large, heart-shaped, of a waxen yellow color; stem from an inch to an inch and a half long, slender, inserted in an open superficial cavity; stone small; flesh firm, yellowish white, flavor sweet and fine; quality "very good."

2. *Late Bigarreau*—A seedling of Professor Kirtland; large; obtuse heart-shaped; bright crimson delicately mottled; stem an inch and a

half long, inserted in a wide, open cavity; stone medium; flesh firm, crisp, yellowish white; flavor pleasant; quality "very good."

3. *Baltner's Morello*—of medium size; roundish; deep crimson; stem an inch and a quarter long, slender, inserted in a deep, moderately wide cavity; flavor acid; quality scarcely "good."

From Dr. E. W. Carpenter, Lancaster—Magnificent specimens of four varieties of Cherries:—

1. *Napoleon Bigarreau*—Very large, some of them weighing eighty-four grains Troy. A branch fourteen inches long contained seventy Cherries, and weighed eleven ounces, of which the wood and foliage constituted two ounces. This is a very productive variety, and of "very good" quality.

2. *Grafton*—Another very productive variety, of "very good" quality. Some of the specimens were even larger than those of the Napoleon Bigarreau, and weighed ninety-two grains, Troy. A branch seven inches long, containing forty-four Cherries, weighed seven ounces, including the wood and foliage, which weighed one ounce.

3. *English Morello*—remarkably fine, nearly three inches in circumference; quality "best" for culinary purposes.

4. *Early and Late*—in size, form, color and quality, very similar to the preceding.

From Mr. Casper Miller, Lancaster County—Very handsome specimens of four varieties of Cherries:—

1. *Onesio*—This new variety originated in Conestoga Township, Lancaster County, Pennsylvania. Fruit very large; obtuse heart-shaped, slightly indented at the apex; dark purple; stem from an inch and three-quarters to two and a quarter long, slender, inserted in an open cavity; flesh purplish, firm; flavor sugary and very pleasant, quality "best."

2. *Black Tartarian*—Fine specimens of this delicious variety.

3. *Grafton*—Known also as the Amber of Cox, the Yellow Spanish, and the Bigarreau. Fair specimens.

4. *White Bigarreau*—Common in our market. Sometimes confounded with the Grafton, from which it differs in being more regularly heart shaped, and of a lighter color.

From Alexander Parker, of this City.—Four varieties of Plums:—

1. *Seeling Plum*—Beautiful specimens, resembling the Mirabolan. Above medium, round, seeder; stem half an inch long, slender; flesh greenish yellow, juicy; flavor ordinary; quality "good" for the season; period of maturity late of June and beginning of July.

2. *Another Seeling*—A few days later than the preceding, but in other respects very similar to it.

3. *Parker's Mammoth*—Very large, nearly six inches in circumference. It closely resembles the Washington with which it is probably identical.

4. *Bingham Plum*—Beautiful specimens. Large; truncated oval; greenish yellow, occasionally with delicate carmine dots on the exposed side; suture on one side extending from the base to the apex; stem three-quarters of an inch long, by one-twelfth thick, inserted in a deep narrow depression; stone adherent; flesh yellowish, juicy; flavor pleasant; quality "very good."

From Isaac B. Baxter.—The *Mushe Mushe Apricot*, and a Plum imported from France as the *Royale Hative*. The latter is not true to name, as the color of the *Royale Hative* is purple. The specimens exhibited by Mr. Baxter were large; oval; of a green color, unadherent; quality "very good."

From Alan W. Carson, Montgomery county—A box of Pears grown on the premises of Mr. Schlater. Size medium; long pyriform; yellowish green, and on the exposed side sometimes a fawn colored cheek with a few red dots; stem an inch long by one-eighth thick, inserted occasionally somewhat obliquely, and without depression; bark set in a superficial basin; seed small, black, often abortive; flesh yellowish white, rather granular, moderately juicy; pleasant flavor; quality "good." The variety is probably the English Jargonelle, the Espargne of the French.

From Thomas Hancock, Burlington, N. J.—Specimens of eight varieties of Pears. *Elwans' Moulton*, quality indifferent. *Dr. Hodge's Seeling*, "good." *Bloodygood*, "very good." *Manning's Elizabeth*, "very good." *Rosliever*, "best." *Tatnell's Harvest*, scarcely good. *Beurre d'Amour*, fine specimens. *Limon*, "very good."

From Robert Baist—Twelve varieties of Pears and two of Apples. The specimens were beautiful, but not sufficiently mature to test their quality. They comprised the following kinds: *Pears*—*Indreux*, *Bartlett*, *Belle de Bruxelles*, *Beurre Gombault*, *Capitaine*, *Collins*, *Crossane*, *Doyenne d'Eté*, *Flemish Beauty*, *Judienne*, and two unknown. *Apples*—*Irish Codlin*, and *Rambour d'Élé*.

From Samuel Ott.—Two varieties of Plums and three of Pears.

1. A Seeding Plum, raised by John Cope, of Southwark. Large; an inch and three-quarters long by one-half broad; long oval; dark purple; stem three-fourths of an inch long, slender; flesh not very juicy, free from the stone; flavor acid; quality "good" for culinary purposes.

2. A cling variety of the Red Magnum Bonum; very large; oval; purple; stem five-eighths of an inch long by one-twelfth thick; quality "good."

3. The *Lyons Pear*—Fine specimens.

4. The *Lyons*—A handsome specimen, quality "best."

5. The *Oct*.—This is the fifth consecutive year that we have had an opportunity of testing the quality of this fine Pennsylvania fruit, which we regard as the most delicious of all summer Pears.

SPECIAL REPORT

Of the Entomological Committee.

AUGUST 15TH, 1853.

To the President of Penna. Hort. Society:—

The Committee on Entomology respectfully Report, That their attention has recently been directed to several insects, of which specimens, in various stages of transformation, were received from members of the Society.

1. A species of coccus, or Scale Insect, of the Apple tree; a noxious Bark Louse, which injures the tree by sucking the juices from the branches to which it is permanently attached. They are of a brown color, about one-tenth of an inch in length, of an oblong oval form, and gregarious in their habits. Where they are crowded together in great numbers, on the limbs and branches, as is often the case, the growth of the tree is materially impaired, and its life endangered. Dr. T. W. Harris, in his able "Report on the Insects of Massachusetts injurious to vegetation," recommends, as the best remedy for its destruction, "a wash made of two parts of soft soap and eight of water, with which is to be mixed lime enough to bring it to the consistency of thick white wash." This application is to be put on with a brush, to the limbs affected, "in the early part of June, when the insects are young and tender." We have also used, with entire success, in the winter, the whale oil soap, applied with a hard brush.

2. *Carpocapsa Pomonella*, or Apple Moth. This is the insect which disfigures so many of our apples, and causes such numbers of them to fall prematurely from the tree. Mr. Ewens, a member of our Society, in passing through his orchard, pulled up a sod of grass, and laid it in the crotch of an apple tree. Subsequently, he found it to be full of cocoons, which proved to belong to the insect in question. In this case, the apple worms, as is usual with them, had left the fruit, after they had attained their full larval growth, (some of them whilst it was on the tree, and others after it had fallen,) to take refuge in the crevices of the trunk. But finding a convenient shelter in the tuft of grass, they availed themselves of it. Dr. Harris has recommended old cloth to be used for this purpose; and it is evident that if these facts be taken advantage of when the infected apples begin to drop prematurely, the summer and autumnal broods may be materially diminished. It is of most importance to attend to the latter brood, which furnishes the individuals that live through the winter, and thus preserve the species for another year.

3. *Aphis* (*Pemphigus*) *Stamineus*. This name is proposed for a large species of *Aphis*, which forms follicles on the leaves of the silver-leaved Maple (*Aceriobocarpum*). The specimens were sent to us by our ex-President, Caleb Cope, Esq. This curious *Aphis* appears to be a new species. Dr. Fitch, in the descriptions of the New York State Cabinet, mentions the European *Aphis aceris* as occurring in New York, and may have this woolly species in view. But the description of the foreign one does not mention the remarkable filaments which approximate the insect to certain tropical forms. Both sexes are covered with white down, and have a bunch of white filaments posteriorly, some of which are three-fourths of an inch long, a character in which this species surpasses the *Eriosoma* of the apple tree. MALE.—Black, feet long, slender and rufous; Tarsi biarticulate; wings slightly deflexed, translucent, pale ferruginous at the base; submarginal nervure conspicuous, black, and ending in a long stigma; disc with four simple nervures; posterior wings with three eurvures; Mesonotum polished, with a deep V-shaped impression; abdomen without tubes; Promiscus obsolete; antennae 6-articulate, the first two short, the 3d long, and the 4th, 5th, 6th, gradually lengthening; length of the body $1\frac{1}{2}$ lines, or to the end of the wings $2\frac{1}{2}$. FEMALE and pupa.—Apterous, dark reddish brown, feet paler; Promiscus twice as long as the head, thickened near the apex; length $1\frac{1}{2}$ lines.

Chester County Horticultural Society.

The monthly exhibition of the Chester county Horticultural Society for August, was held at the Hall on Saturday, the 13th inst. The display was very good both in quantity and quality.

Premiums were awarded as follows:—For the best display of cut flowers in a basket covered with mosses, to P. Gallagher, gardener to Dr. Pennock; for the best centre-table bouquet, to P. Morris & Co.; for the best mantle do., to Mrs. M. B. Thomas; for the best hand do. to Hartman & Co. The display of cut flowers was fully equal to our expectations, and we are sorry that we did not take fuller notes at the time so as to name all the contributors.

For the best peck of Peaches, premium to Hartman & Co.; for the best one dozen Pears, to Dr. J. K. Eschelman; for the most numerous named varieties of Pears to do. Dr. Eschelman exhibited eleven varieties of ripe pears, and five unripe; Hartman & Co. exhibited five varieties. Hartman & Co., special premium for Apples. For the best one dozen plums to Joshua Embree. For the best display of vegetables to L. F. Hoopes; second best do. to Hartman & Co.; for the best one peck of potatoes to L. F. Hoopes. A special premium was awarded to John S. & Beverly Burton, for very superior fruit of egg plants, grown in the garden of Dr. Isaac K. Walker. Superior tomatoes were exhibited by J. H. Bull, Esq., and Miss M. Bennett.

The following named gentlemen were appointed a committee to superintend the annual exhibition to be held on the 15th, 16th, and 17th days of September next:—J. Bayard Wood, Wilmer Worthington, Jr., Wm. W. Jester, Richard B. Taylor, and Pierce Hoopes.

PENNSYLVANIA FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

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Action of Drought on Plants.

The specific action of drought on plants is one of the problems not yet entirely solved. Whether it is the indirect waste of moisture on the plants by evaporation, or the want of the due proportion of water necessary to build up the structure of plants, or whether it is some indirect action on the constituents of the soil, is by no means a settled question.

The present season has afforded abundant illustrations of the effect of want of moisture on the several plants the farmer has to cultivate; and what is more remarkable, the drought, though absolutely less than it was last year, seems to have had a greater effect on the plants. The meadows especially appear to have suffered. In all the Northern counties particularly, the grass crop is peculiarly affected. The finer and shorter grasses are absolutely either wanting, or so thin that they show the meadow to be without bottom grass. The coarser grasses are tall, but thin, and running to seed, forming no tillering stalks, and few blades in comparison to those of former years.

The corn is the same—thin, stunted, and spiry in its character. There has been no tilling—no thick matted surface. The drills have been visible up to the present period, and the stems are fast running to ear before half the usual height is attained, being also hard and yellow in color, and as different as possible from the graceful flopping blade the wheat plant usually exhibits at this period.

Now, in what specific way has this drought so acted on the plants? In ordinary vegetables ninety per cent. of their whole structure is simply water. Hence it is easy to conceive how large a quantity of that material is necessary during their growth and development. But there was no such absolute deficiency this season. The soil always contained a comparatively large amount of moisture; the dews were often plentiful, amounting to fully as much more as any diurnal development of the plant could require, and the tables of rain fallen in the Spring of this year, we have seen, showed a larger quantity than in the corresponding months of last year. Hence it seems we must look to the abstract cause of the injury—to somewhat beyond the mere denuding of the plant of water, as such.

We think the theory of Liebig far better established this season. The plant to take up its elements, must have them presented to it in a state of solution. The action of rain operates to dissolve regularly and gradually the material required by the plant, both in the soil and in the rocks from which the soil continually forming, by disintegrating the small particles existing in the land. These are being supplied to the plant by the rains as it requires them, but this year they have not been so washed out and made ready for its use.

But, why did not the same cause operate equally in the Spring of 1852? Simply because the incessant rains of the autumn and early winter had washed out the soluble constituents of the soil, so as to leave less free material in the land by far than in the previous Spring, and hence the ordinary draught had much greater effect on the plants this year than it had last.

The effect of water on plants, regularly supplied, is most wonderful. Those who have seen the Clipstone water meadows, and the small and clear stream which produces from three to five crops of grass per annum, either depastured or mown, or partly the one and partly the other, must be convinced that it is almost as much owing to the plentiful supply of water in a dry season, as to any great amount of ma-

nure held by that small river in solution, that the vast increase of grass is produced.

By watering, Mr. Kennedy, of Myremill, keeps close upon a thousand head of stock on ninety acres of Italian rye-grass. In ordinary seasons, from five to nine sheep can be kept on one acre of land; the latter may be done in a drooping season, on clover lays, on well cultivated land; but with the aid of a little artificial food and by the application of liquid manure, in the shower form, by steam, Mr. Kennedy, can keep fifty-six sheep per acre! Nor can we believe that it is altogether due to the manure. To that it is partly owing, doubtless; but it is by far more owing to its being watered with that manure in a soluble state, and so fit for the immediate use of the plants. Hence he is independent of season. The water-drill to which we before alluded, is an application of the same principle; and the wonderful results of the dressing of dissolved bone liquid, in a very dry season, by the Duke of Richmond, is a powerful fact in the same direction.

That it is the want of soluble manure, or, in other words, elements of plants, which is mainly the cause of the injury, is manifest from the fact that all the poorest land has suffered by far the most from the drought. The very highly manured land has sustained the least damage; while on land to which very highly soluble manures, Peruvian guano, for instance, and similar materials, have been applied, the crops are growing vigorously.

Nor let it be forgotten that the rain brings down the ammonia, which, in dry states of the atmosphere, will float undisturbed; and this failing, as well as the soluble supply below, would of course aggravate the cause of injury.

But what can now be done, with the meadows ripe, and not one-half or one-third of a crop? We say, free your pastures at once, and put in the whole of the stock, if rain has come, and eat up the meadows thoroughly bare. This will amply relieve the pastures, and afford them the chance of an entire new growth. The meadows, with their small produce, will soon be eaten up; and let a dressing of two or three cwt. of the best guano be then applied to them, and a beautiful new crop, and not very late, will yet be secured; the mowing machine and haymaker will soon get it, even if it should clash with the harvest; but we are clear that on all kinds of land more produce, with the present crop given in, will be obtained by such a course, and the present crop will be very acceptable of itself. The fog, or aftermath, has also every prospect of being better after thus supplying the deficiency of the year.—[Mark Lane Express.

Apples for Milch Cows.

We have long been satisfied that one of the best and most profitable crops which any land owner could raise, is sweet apples for milch cows. Late in autumn all cows shrink very much in the quantity of milk they afford, more especially as soon as the sharp night frosts destroy the succulence of the pastures. It is at this period that moderate feedings of sweet apples, say six quarts given morning and evening, have restored the quantity of milk and increased its richness; and a great advantage has resulted where a supply could be had for feeding through winter. An unfavorable opinion of apples, as a food for cows, has sometimes arisen from the furious over-feeding of half starved animals, who have accidentally broken into orchards, and brought on disease, fever, and consequent drying of the milk by immoderate gorg-

ing,—a reason for renouncing such food, would as well apply to the exclusion of oats from horses and cold water from men, because they are sometimes injured by an excess.

Amid the profusion of tree-planting of late years, we are surprised to see so few orchards set out for feeding domestic animals, by a selection of some particular varieties especially adapted to this very purpose. We want a different sort from those ordinarily selected for table use, which are admired for their pleasant and delicate flavor; while a stock-feeding apple should be in the first place, a free grower and most abundant bearer; next, of firm and rather dry texture, and of rich but not delicate flavor. If dry and firm, they are more easily gathered without bruising, more easily kept from freezing, and contain more substantial nutriment than light, juicy, tender sorts. And as a general rule, such apples are the best keepers,—take, for example, the firm and dry English and Roxbury Russets, and the Black Gilliflower, the latter of which has been already proved a good sort for Spring feeding, and would be still better if perfectly sweet. The present is likely to be one of the most abundant fruit seasons ever known; and we believe that a more acceptable service could not be rendered by pomologists to the enlightened agricultural public, than a thorough examination among the innumerable native apples, for a pre-eminent productive sort, adapted to stock feeding.

Would it not be well worthy the attention of a State Agricultural Society, to offer liberal premiums for the best, second, and third new variety that should be presented for this purpose, the decision to be founded on a bushel placed before the awarding committee, accompanied with statements, properly authenticated, of the size and age of the tree, treatment, present crop, and former character for bearing?

We should like to see something of this kind attempted, instead of perpetually repeating the same old premiums on what has been well known for a quarter or half a century, all through the land.

It is the cheapness of the apple crop, when thus raised under the most favorable circumstances, that strongly commends it to the attention of stock-raisers. A very prolific sort will bear five times the quantity of the ordinary average of table apples; and forty such on an acre of land might be easily made to average ten bushels each annually. The Rhode Island Greening, in Western New York, has in repeated instances, in a single neighborhood, yielded forty bushels per tree; and in New England the Baldwin has yielded over fifty bushels. Ten bushels per tree, then, for sorts especially chosen for productiveness, must be a moderate estimate—amounting to 400 bushels per acre annually. If fifty dollars is paid for an acre of ground, and ten dollars for forty young trees and transplanting, the crops from the ground will pay interest and cultivation till the trees themselves begin to afford remuneration. Sixty dollars, therefore, will pay for a bearing orchard; but admitting its cost to be eighty dollars, and the annual plowing, harrowing and manuring, to be ten dollars annually; the whole yearly cost of the apple crop will be fifteen dollars and sixty cents; at seven per cent. interest. That is, it will be a little below four cents per bushel, on the tree.

No other crop can be raised with so little labor—an important consideration for a country where wages are so high, where no annual planting is needed, and where the annual cultivation, entirely dispensing with hoeing, consists only of a single plowing, and a

few subsequent dressings with the harrow or two-horse cultivator, in order to produce the very moderate crop we have supposed, and which we believe would in many localities and seasons be doubled, and be afforded at one-fourth the cost, or not over one cent per bushel. It must not be forgotten that all these estimates are made on the supposed basis of thorough annual cultivation, giving an immense advantage over the more common practice of entire neglect.—[Country Gentleman.

Mysteries of Bee-keeping Explained.

Being a complete analysis of the whole subject, by M. Quinby, practical Bee-keeper. Published by C. M. Saxton, New York. Price \$1 00.

We have been favored with a copy of this work, which, on examination, we find to be a really practical and valuable treatise on Bee-keeping and management, going into the whole matter in a practical way, such as bee hives, bee pasturage, breeding, wax, destruction of worms, putting on and taking off boxes, securing from moth, swarming, loss of queens, fall and winter management, purchasing stocks and transporting, &c. Several of the treatises on Bees are too theoretical, with which the present offers a favorable contrast, containing the author's own experience for the last twenty years. As he remarks, the chapter on loss of Queens alone, will be worth, to any one not in the secret, many times the cost of the work. In the preface he says:

It is time that the word "*luck*", as applied to bee-keeping, was discarded. The prevailing opinion, that bees will prosper for one person more than another, under the same circumstances, is fallacious. As well might it be applied to the mechanic and farmer. The careless, ignorant farmer, might occasionally succeed in raising a good crop with a poor fence; but would be liable, at any time, to lose it by trespassing cattle. He might have suitable soil in the beginning, but without knowledge, for the proper application of manures, it might fail to produce; unless a *chance* application happened to be right.

But with the intelligent farmer the case is different: fences in order, manures judiciously applied, and with propitious seasons, he makes a sure thing of it. Call him "*lucky*" if you please; it is his knowledge and care that render him so. So with bee-keeping, the careful man is the "*lucky*" one. There can be no effect without a preceding cause. If you lose a stock of bees, there is a cause or causes producing it, just as certain as the failure of a crop with the unthrifty farmer, can be traced to a poor fence or unfertile soil. You may rest assured, that a rail is off your fence of management somewhere, or the proper applications have not been made. In relation to bees, these things may not be quite so apparent, yet nevertheless true. Why is there so much more uncertainty in apian science than other farming operations? It must be attributed to the fact, that among the thousands who are engaged in, and have studied agriculture, perhaps not more than one has given his energies to the nature and habits of bees. If knowledge is elicited in the same ratio, we ought to have a thousand times more light on one subject than the other, and still there are some things, even in agriculture, that may yet be learned.

It is supposed, by many, that we already have all the knowledge that the subject of bees affords. This

is not surprising; a person that was never furnished with a full treatise, might arrive at such conclusions. Unless his own experience goes deeper, he can have no means of judging what is yet behind.

"In conversation relative to this work, with a person of considerable scientific attainments, he remarked, "You do not want to give the natural history of bees at all; that is already sufficiently understood." And how is it understood; as Huber gives it, or in accordance with some of our own writers? If we take Huber as a guide, we find many points recently contradicted. If we compare authors of our day, we find them contradicting each other. One recommends a peculiarly constructed hive as just the thing adapted to their nature and instincts. If a single point is in accordance with their nature, he labors to twist all the others to his purpose, although it may involve a fundamental principle impossible to reconcile. Some one else succeeds in another point, and proceeds to recommend something altogether different. False and contradictory assertions are made either through ignorance or interest. Interest may blind the judgment, and spurious history may deceive.

It is folly to expect success in bee-keeping for any length of time, without a correct knowledge of their nature and instincts; and this we shall never obtain by the course hitherto pursued. As much of their labor is performed in the dark, and difficult to be observed, it has given rise to conjecture and false reasoning, leading to false conclusions.

When I say a thing *is so*, or say it is *not so*, what evidence has the reader that it is proved and demonstrated? My mere assertions are not expected to be taken in preference to another's; of such proof, we have more than enough. Most people have not the time, patience, or ability, to set down quietly with close observation, and investigate the subject thoroughly. Hence it has been found easier to receive error for truth, than to make the exertion necessary to refute it; the more so, because there is no guide to direct the investigation. I shall, therefore, pursue a different course; and for every assertion endeavor to give a test, that the reader may apply and satisfy himself, and trust to no one. As for theories, I shall try to keep them separate from facts, and offer such evidence as I have, either for or against them. If the reader has further proof that presents the matter in another light, of course he will exercise the right to a difference of opinion.

I could give a set of rules for practice, and be very brief but this would be unsatisfactory. When we are told a thing *must be done*, most of us, like the "inquisitive Yankee," have a desire to know *why* it is necessary; and then like to know *how* to do it. This gives us confidence that we are right. Hence, I shall endeavor to give the practical part, in as close connection with the natural history, that dictates it, as possible.

This work will contain several chapters entirely new to the public: the result of my own experience, that will be of the utmost value to all who desire to realize the greatest possible advantages from their bees.

Raspberries.

The Blue Hen's Chicken says, Peter Talley, of Brandywine Hundred, has sold the present season, 4000 boxes of raspberries, to Wm. R. Smith, for which he received \$250. Mr. T. has about one acre devoted to the rearing of this fruit, and as the cost of picking is only one cent per box, it may be seen that they have paid quite handsomely, much better than raising grain.

Concentrated Manures.

The following excellent and appropriate remarks, we copy from the English Agricultural Gazette, but they are also perhaps more especially adapted to the practice of farmers in our own country. The absolute waste of fertilizing materials, on some of our best managed farms, and the great loss annually sustained in the management of barn-yard manure, are truly enormous, and we commend the article to our readers.

The introduction and general use of concentrated manures, both of natural and artificial origin, form one of the most remarkable features in the modern history of agriculture. Twenty years ago farm-yard dung, lime, and bones constituted the simple and nearly sole sources whence the farmer obtained his supply of fertilising substances. Now, however, science and perverted ingenuity—if such a conjunction can be tolerated in one sentence—have multiplied manures to such an extent that the chief difficulty the non-scientific farmer has to encounter is how and what to select, where the choice is so varied in its objects, and so complicated in its nature by puffing advertisements, every adjective of which is a superlative, and every sentence and statement an illustration of that style of language familiarly known as the hyperbole. Already are the stock-phrases of the *turf* introduced into our advertising vocabulary in the shape of unanswerable and all-argument-defying bets of hundreds of pounds sterling, as to the virtues of a certain manure; and by and by we may probably see some bold innovator of the Moses & Son's style, retaining a doggerel rhymester to rehearse in verse, the superiority of his super-excellent super-phosphate, manufactured, however, not from bones or coprolites, but from the Hampshire hill; and also of his genuine ammoniacal guano, deposited, not by the sea-birds of the Pacific, but by the quiet waters of the Eocene period, in the chalk basin which holds the London clay.

"Were farmers wise, adulteration is a game that manure dealers would not often play at," contains an advice not less important to the agricultural community than that pithy maxim from which it is parodied is to the body politic. The question, "what has chemistry done for agriculture?" is occasionally asked in a disparaging and doubtful tone by some disappointed and despairing practical man; but a much more pertinent query would be to enquire candidly, "What practical benefits have farmers, as a class, endeavored to obtain from chemistry?" So far as the former question is concerned, we need only to compare the condition of British agriculture as it was in 1823 with what it is in 1853, to be convinced of the fact that, had chemistry not been brought to bear upon it during the intervening period, we must still have been groping in the dark for the simplest principles upon which the manufacture and application of manure are based. If chemistry has done nothing for agriculture beyond merely suggesting the making of super phosphate of lime, this country has paid very dear for the now nearly time-worn discovery of a German chemist; and our great agricultural societies have been and are still lavishing funds that might be better employed, if it be true that the only laurel which British science has yet been able to wreath around the brow of agriculture is the gift of a foreigner.

But to many of our readers who have had practical and substantial proofs of the power of chemistry

to render good service to agriculture, any defence of this science must seem a work of supererogation; still, there are others who are either wilfully or ignorantly blind to the fact that it is to it that we owe not only the introduction of many new manures, and protection against fraudulent dealers, but also sounder views regarding the management and application of the contents of our tanks, boxes, and straw-yards. While we would yield to the practical man any merit that may be attached to the first employment of guano in farm practice, yet his experiments and results, however successfully carried on and concluded, could never have suggested the use of any one of the many fertilizing substances which chemical investigation has discovered. The chemist has pointed out and specified the elements of which guano is composed, and, in addition to this information, he has taught us that its fertilizing principles are not *sui generis*, but are distributed in very great profusion over the length and breadth of the United Kingdom, and have long been, and still are, intentionally and unintentionally permitted to run to waste than waste under our very noses—not secretly or stealthily, but with a most offensive obtrusiveness to every organ of sense that can take cognisance of their presence. Every common or private sewer that discharges its contents into a running stream, every black pond which receives the drainings of a farm-yard, and every uncovered dunghill, are as certainly, at this moment, dissipating the elements of fertility into the ocean and atmosphere, as the guano ships are bringing them to our shores. Our country is thus not unlike a patient laboring under chronic hemorrhage, whose life and strength can only be sustained by a large and constant supply of concentrated and stimulating nourishment. That this wasting and wasteful disease of the "body agricultural" is susceptible of an effectual and radical cure, is what no one will doubt who is at all conversant with those principles of economy which characterise our arts and manufactures.

If the waste materials of a factory or a foundry can be worked up anew into useful forms, so assuredly can those which are produced in the consumption of our crops by man and beast. Properly speaking there is no such thing in nature as waste; for every process of growth and decay is but a series of loops in that endless web in and within which the mysterious functions of vegetable and animal life are completed and ever again renewed—each generation springing, phoenix-like, from the ashes of its predecessor. Even the waste which human ignorance occasions is ultimately repaired by the diligent and thrifty hand of nature; for, although the materials of fertility are to all human appearance lost for ever in the depths of the ocean or dissipated in the heights of the atmosphere, yet they are safely stored up for future use sometime and somewhere. Nature thus strives hard to teach us wisdom; but we have been slow to learn—slow to perceive that her principles are imperatively uniform, and yet so flexible that, like the elephant's trunk, they are capable of being applied to the smallest as well as to the vastest objects. If a farmer is so careless of the materials of fertility which his own farm produces, or so ignorant of their value as to permit them to ooze away into rivers or be lost in the atmosphere, nature will take care that they shall in some way contribute to the general good; but to him who thus despises them, they are lost to all intents and purposes. One pound weight of ammonia from the Chincha islands is not one whit more valuable than the same quantity volatilised from a fermenting dunghill in Britain; yet how

general is it the practice now-a-days for shrewd, intelligent, saving farmers to pay cheerfully from 5*d.* to 6*d.* for the former, and at the same time to begrudge one farthing's worth of labor to secure the other.

J. II.

A Liquid Fertilizer for Choice Plants.

BY AN AMATEUR.

Dear Sir—I am confident that there are many of your lady readers, and perhaps many of the other sex, who are puzzled among the many *new manures*, and having failed with some, and injured their plants with others, they end by raising only sickly and meagre plants, when they might have them presenting a luxuriant and satisfactory appearance—with leaves of the darkest green, and flowers or fruit of double the usual size.

Having made a trial for three years past, with a perfectly safe and satisfactory liquid fertilizer, which appears to suit all kinds of vegetation, which is clean and easily applied, and procured without difficulty, in any town, I confidently recommend it to your readers, especially those who wish to give especial pains to, and get uncommon results from, certain favorite plants—either in pots or in the open garden—plants, whose roots are within such a moderate compass, that they can be reached two or three times a week, if not oftener, by the watering pot.

This liquid fertilizer is made by dissolving half an ounce of sulphate of ammonia in a gallon of water.

Nothing so good can be cheaper, and the substance may be obtained at almost any apothecary's.

Now for the mode of using it. I may say, at the outset, that weak as the solution appears to be, and is, if plants are watered with it daily, they will die—just as certainly as a man will who drinks nothing but pure brandy.

The right way to apply it is, to water the plant with this solution every sixth time, the other five times with plain water.

The proportion is so simple, and the mode of using it so easy to understand, that the most ignorant person cannot possibly blunder about it—if he can count six. If we prepare the solution occasionally, and water our plants in pots every Saturday, with this ammonia water, and all the rest of the time with plain water, we shall have a safe rule.

The result will, I am sure, both delight and surprise every person who will make a trial of it. It has become such an indispensable thing with me, that I regularly mix a barrel of it every Friday, and use it on Saturday, upon any plants that I particularly wish to invigorate and stimulate. I do not know that I have seen a single instance of its disagreeing with any plant—ammonia being the universal food of vegetation. Of course, the more rapid growing plants—those with foliage that perspire a great deal—are most strikingly benefited by it. Of course, also, plants that are at rest, or not in a growing state should not be fed with it; but any plant that is about starting, or is actually in a growing state, will not fail to be wonderfully improved by it. Many plants that have fallen into a sickly state by reason of poor, or worn out soil, will usually, in the course of a month, take quite another aspect, and begin to develop rich, dark green foliage. I will enumerate some of the things that I have had great success with.

STRAWBERRIES.—Beds of indifferent appearance at the opening of the Spring, last season, after being

watered four times with this solution, grew very luxuriantly, and bore a crop of remarkably fine fruit. This year I have repeated the experiment on half of every bed; both foliage and blossoms are as large again on the watered, as on the unwatered bed; and, by way of comparison, I have watered some with plain water also, and find, though rather benefited, for the strawberry loves water, they have none of the extra depth of verdure and luxuriance of those watered with ammonia.

EARLY PEAS.—At least a week earlier than those not watered, and much stronger in leaf and pod.

FUCHSIAS.—A surprising effect is produced on this plant, which, with the aid of ammonia water will grow in very small pots, with a depth of verdure, a luxuriance and a profusion and brilliancy of bloom, that I have never seen equalled. Old and stunted plants are directly invigorated by it.

DWARF PEARS.—Some sickly trees, that I have given the best attention for three years previously, without being able to get either good fruit or healthy foliage, after being watered four times with the solution—of course with the usual intermediate supply of common water—became perfectly healthy and luxuriant, and have ever since (two years,) remained so.

DAHLIAS.—Which I have never succeeded well with before, have done beautifully with me since, flowering most abundantly and brilliantly, when watered in this way. In all of our door plants, if mulching is used, only half the quantity of plain water is needed. For plants in pots I consider it invaluable; and gardeners who wish to raise specimen plants for exhibition, will find this mode of watering them every sixth time with the solution, to produce a perfection of growth not to be surpassed in any other way. [Philadelphia Florist.

Gigantic Cedar,

There exists in California, says the Echo of the Pacific, on one of the mountains of the country of Calaveras, a Cedar said to be the largest tree in the world. A correspondent of the Herald of Sonora, who has paid a visit to the spot for the purpose of examining this prodigy of the vegetable kingdom, describes it as follows:

"At the level of the earth its circumference is 92 feet—4 feet up, it is 88 feet—at 14 feet, it is 61—and thence it gradually tapers. Its height is 235 feet; and it has none of that deformity which commonly characterises trees with enormous trunks. From one end to the other it is a model of symmetry. The age of this giant Cedar, counted by its zones, is 2520 years!"

This king of the forests of the world is now having its bark—which at the base is nearly 14 inches in thickness—stripped away to a height of 50 feet, for the purpose of being sent to the Great Exhibition in New York.—[Athenæum.

Lima Beans.

Lima Beans may be preserved so as to be as palatable and green in mid Winter, as in August. Pull and shell the beans a little younger than they are usually gathered for use in the Summer season. Spread them thinly upon the floor of a garret or an airy light loft, and occasionally turn them until they are dry. Soak them twelve hours before cooking, in warm water, and when cooked they will be as tender, plump and good as at any season of the year.—Exchange.

The Crystal Palace.

During the past week many additions of an attractive and useful character have been made to both the building and its contents. A ship from Loughorn came into this port on last Tuesday, with no less than 172 cases for exhibition, and many more from other parts of the world, are yet to arrive. We must give our French cousins the greatest credit for having their department arranged in the neatest manner, and in the most advanced state. Our English cousins are the farthest behind in arrangement and decoration; indeed, Uncle John must get up some *high pressure* before he can steam up to be alongside of any department in the building. As it regards neatness, the British department does not at all compare yet with any other—a radical reform is wanted, and we hope the British Commissioners will push matters along with more spirit, and taste, next week. The Belgian Department is very good, and in many manufactures, such as velvets, we have been delightfully surprised; there is a display nearly rivaling that of the French Department. Austria, “this patch on the surface of the earth,” has shown herself in every branch of the fine and useful arts, to have attained a high position in producing something more than *patch work*.

The American Department has advanced nobly during the past week. In both the useful and ornamental arts, our countrymen are going to do more than we expected. Our brethren from other lands, we are confident, will go away with a very high opinion of the taste, genius, and skill of the people within the borders of our land. That eminent chemist, Justus Liebig, in his “Letters on Chemistry,” page 130, says, “the quantity of soap consumed by a nation would be no accurate measure whereby to estimate its wealth and civilization.” By this measure we justly could claim, we believe, for the United States, the title of the most wealthy and civilized nation in the world. Pillars of soap, busts of soap, windows of soap, soap of all colors, in all shapes, in all sizes, and of all smells, mark the vast extent of our soap manufacture. We are no doubt the best washed people in all creation. Some people may think we are somewhat quizzical in our remarks, owing to the equivocal use of the word soap, such as *soft-soaping*, for flattery, &c., but we assure them we are sincere and mean to be understood as having assumed for our standard of civilization and wealth, the quantity of soap consumed by the people.

MACHINE ROOM.—When this room is complete, and all the machines to be exhibited are whirling along in all the graceful attitudes so captivating to the enthusiastic mechanic we shall see something worth being proud of, and pleased with. There will be a single line of shafting 450 feet long, and straight as an arrow. The largest metal cutting shears in the world are now being fitted up; two large horizontal engines from Lawrence, Mass., working on one shaft, are now being put up for driving the machinery; a large beam engine from Providence, R. I., will soon be put up for a driving engine also. The boilers to supply the driving engines, are erected on the other side of the street, north of the building, and entirely separate from it. No less than five large steam boilers have been provided, and the steam is conveyed under ground across the street. Plenty of steam power is thus provided for all the machines, large and small, which will be exhibited. We also expect to see some fine locomotives on exhibition and trial for a short period; this will afford us much gratification. It will be the month of September, we believe,

before the machinery will be all in operation; the work to be done cannot and will not be slighted. The Superintendent, Mr. Holmes, is pushing matters as fast, as discreetly, and effectively, as he can.—[Scientific American.]

American Wine.

Mr. Cist, in a recent number of his Advertiser, gives the following interesting account of the present and prospective conditions of grape culture and wine making in Cincinnati and in the vicinity. He says:

“I have recently visited the wine cellars of Messrs. Longworth & Zimmerman, on Sycamore street. Mr. Zimmerman, the active partner, with his two sons, has been engaged in Europe for years in the manufacture of wine, and considers the Catawba a finer basis for first-rate wine, than any in Germany or France. The drawing off and properly ripening wine they consider of more importance to the development of a fine article, than the original manufacture.

The wine cellars of this establishment are 105 feet in length, an average of 35 in width, and 18 in height. Each season's wine is kept by itself, in casks of 2,000 to 2,500 gallons capacity, and none of our native wine is bottled in this establishment until it has been four years in casks. Thus the wine bottled this season, is the vintage of 1848, as that of next year will be the vintage of 1849. In this way the entire sediment, precipitated by successive fermentation, is retained within the cask.

Messrs. Zimmerman will put up this season 30,000 bottles; in 1853, 50,000; and in 1855, 100,000. What will be done beyond that period, must depend on the yield of the grape crop in 1853; and later seasons. All this is Catawba wine, termed Still, in distinction from Sparkling Catawba.

Mr. Longworth is engaged in the manufacture of Sparkling Catawba, at his wine cellars on Butler St., of Broadway. He made in 1850, 50,000 bottles; in 1851, 75,000, and this year he will put up 105,000 bottles. Sparkling Catawba requires fifteen to twenty months for ripening before being ready for market. Mr. L. has also dry and sweet wines, the first of the Catawba and the other from the Isabella grape.

Messrs. R. Buchanan, Corneau and Sons, G. P. Bergen, Rehfuess, Yeatman, Miller, and others, are also extensively engaged in the manufacture of Catawba wine. All these persons label their wines. The aggregate annual manufacture of first wine may be put down at 150,000 bottles Still, and 180,000 Sparkling Catawba.

Probably 30,000 bottles Still Catawba wine is made sold, and drank in this vicinity by Germans, mostly the product of small vineyards. This is unbranded, and of various qualities—the greater part of inferior quality. But whatever may be the quality of our native wines, they are all pure; that is from anything else than the juice of the grape. One or two manufacturers make sweet wines to a small extent, acknowledged to be fictitious.

The supply of native wines, greatly as it is on the increase, hardly keeps up with the increasing demand. All the wine older than five years, of Catawba, is out of market, and the Sparkling, although not requiring such a large lapse of time to fit it for use, is taken off as fast as it can be made for market.

There are about 1,200 acres of grapes in cultivation in the vicinity of this city. Every year adds to the quantity of bearing vines, and to the number of persons engaged in the business.”—Scientific American.

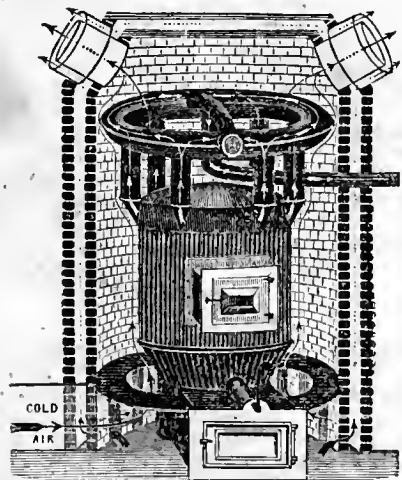
Chilson's Patent Air Warming and Ventilating Apparatus.

Amongst the improvements of the age there is no one more deservedly worthy of attention than the thorough ventilation of our dwellings, school rooms, churches, and work shops. Were it possible to ascertain correctly the number of persons who die annually from the effects of imperfect ventilation, the aggregate would astound many who now deem the subject scarcely worth a passing thought. The scarcity and high price of fuel has effectually banished the cheerful open fires of twenty years ago, and with them a process of ventilation which, however imperfect, was greatly preferable to that now in use in the very large majority of our buildings. Is it therefore a matter of surprise that our bills of mortality show an increase pulmonary disease of truly alarming. Without pretending to any knowledge of medical science, we venture the assertion that nine-tenths of our consumptives have had the seed of their fatal disease implanted in their systems by a want of well ventilated school rooms, dwellings, and places of business.

If this be so, (and who will question it,) it is high time that attention was drawn more closely to the subject.

The production of a healthful atmosphere in those places where daily avocations require our presence, while it seems to render our pursuits far more attractive, exercises in addition, that more important function of supplying the lungs with food properly adapted to their wants.

We are pleased to observe that the difficulty which has always stood in the way of heating dwellings in combination with perfect ventilation, has at length been effectually overcome, by the introduction of Chilson's Air Warming and Ventilating Apparatus, a cut of which is given below.



Having had an opportunity of testing, practically the value of this excellent apparatus, we feel no hes-

itation in recommending it to the attention of our readers.

The following are among the important improvements attained by this Apparatus:

1st. An abundant supply of fresh, healthful, warm air, free from red iron heat, so injurious to health.

2d. The great power of this Apparatus in warming buildings, is a conclusive proof that all the heat is advantageously used in warming the rooms, which accounts for its control in the economy of fuel.

3d. By this Apparatus and the plan of setting the same, there is not a possibility of setting the building on fire in which it is located.

4th. This Apparatus is completely adapted for burning any kind of fuel, anthracite or bituminous coal, wood, &c.

5th. The substantial material, and plan of construction of this Apparatus, render it durable beyond a doubt for life time.

6th. The facility and ease of management, and ready access for cleaning out the Apparatus, &c., is unsurpassed.

7th. The plan for making the joints of the Apparatus proof against the escape of smoke and gas, is in every respect perfect.

8th. Fire may be kept in this Apparatus from Fall until Spring, by replenishing but once a day. This Apparatus has been thoroughly tested in all parts of the country, and now declared to be the best in the world. It has been awarded the highest premiums, (gold and silver medals,) at the principal country fairs and at the World's fair, London, it received the Prize Medal, which, with the unanimous reports in its favor by the different committees of the State and City Governments, (see their various printed reports,) together with the certificates and recommendations of more than seventeen hundred persons who have them in use, (many of whom are professional gentlemen, whose scientific attainments in such matters are well and favorably known,) have combined to render this Apparatus unrivalled in this country. The World's Jury, at the London Fair, have also declared it to be the best in the world.

To be had of S. A. Harrison, 146 Walnut street, Philadelphia, Pa.

Cattle for the East.

The Buffalo Advertiser of the 16th ultimo, says:

"The receipts of cattle at this port have recently been very large. On Wednesday night the freight train on the Central road consisted of thirty-one cars laden with cattle. On Thursday twenty-two cars, and on Friday twenty-six cars similarly freighted."

INDUSTRY.—As the sweetest rose grows upon the sharpest prickles—so the hardest labor brings forth the sweetest profits.

Cranberry Vines.

In answer to many enquiries, respecting culture of cranberries from our subscribers, we annex the following directions, from F. Trowbridge, New Haven, a practical grower. His advertisement will be found on our cover.

"The Bell variety or Egg shape is mostly cultivated in New England, and usually bears good crops as they grow wild—but when transplanted and cultivated, the berries are large and abundant, and bears large crops often after two or three years, from one hundred and fifty to two hundred and fifty bushels per acre—are hardy, and can be cultivated in any part of the United States.

The soil best adapted, is such as will keep moist through the dry season, they have been raised on land high enough to produce corn and potatoes, with a wet substratum under the soil, or a clay and loam. They will not succeed well on dry, sandy, on land liable to bake or become hard in dry weather—but they will produce an abundant crop on poor, swampy land, that will not produce any other valuable crop, or any wet land after being drained. Dry ground should be plowed and harrowed smooth, in a swamp where a plow will not work; the turf or bog may be peeled off or burnt to get the weeds and grass out. They may be set in the Fall or Spring as early as the ground will admit, until the middle of May. Moss, Tan, or anything to retain the moisture would be beneficial around the plant after transplanting; a little sand around the plant, Fall and Spring, will tend to keep the weeds out.

"Plant in drills as you plant strawberry, cabbage, and other plants, one and a half to two feet apart. At two feet apart each way, it will take 10,000 plants to the acre. Hoe them slightly at first, until the roots become clinched, and afterwards no other cultivation is needed, unless to keep out the grass & weeds. The plants may be expected to run together and cover the whole ground in two or three years. They can be gathered with a cranberry rake made for the purpose, to be procured at the Agricultural Stores."

Materials for Milk Pans.

According to the experiments of M. Hinneber, of Moisburg, Germany, 100 Hanover quarts of milk yielded, in tinned milk pans, 7.07 Hanover lbs. of butter; Glass, 7.04; Wooden, (not painted,) 6.96; Earthenware, 6.92; Wooden, (painted,) 6.67.

According to the same experiments, there required for one pound of butter, of milk produced by stall-feeding with green clover, 15 Hanover quarts of milk; produced by stall-feeding with tare and clover, 15.67 quarts; by pasturing, 11.84; showing that the milk obtained from cattle fed upon pastures is richer in butter than milk got from cows which have been fed in the stable with one and the same kind of plants: even a mixture of tare and clover shows an increase over clover alone.—[Polytec. Jour.

Expenses of Importing Jersey Cows.

In answer to many inquiries with regard to the expense of importing neat cattle, we give the following bill of expenses, for two heifers, obtained from a gentleman who has made many importations:

For hay and other provisions,	£9 9 3
Expenses from Jersey to Liverpool,	11 3 0
Keeping in Liverpool one week,	2 3 6
House on board ship,	6 10 0
Commissions, &c.,	17 8

	£30 3 5
Freight, £10, primage, 10s.	£10 10 0

£40 13 5

This is a few pence short of \$200. The freight on these two animals (\$50) is about one-half the usual charge. Primage is an allowance made to the master or hands of a vessel for loading. Almost all the other charges, it will be seen are extortionate.

There is no reason now, why any one, except one owning a herd, and desiring a fresh strain of blood, should import. We have here, already, animals of every English breed, equal to any that are left behind. Besides, the remark of Rosewell L. Colt, that the animals raised in this country (from imported stock) are superior to the imported—is worthy of consideration. In the first place they are acclimated, and again, they are unstrained and uninjured by a sea voyage.—[Journal of Agriculture.

Balky Horses.

Balky, or jibbish horses, are not only a source of great annoyance, but too frequently endanger the property and peril the lives of their owners. An East India gentleman one day took his seat in one of the omnibuses in London, but at the time of starting, all the efforts of the driver proved unavailing, owing to a balky horse attached to the vehicle. The poor animal became more and more restive in proportion to the tortures inflicted upon him by the driver, and several other whipmen who assisted on the occasion. The street became blocked up with spectators, and the interception of other carriages. Great danger was to be apprehended. The East India gentleman above referred to, suggested to the driver and his assistants, that if they would try the East India method of fastening a cord to the horse's fore-foot, and cause a person to pull forward, the animal would start right away. The suggestion was received with contempt. However, after all other efforts failed, a long cord was attached to the animal's fore-foot, and the moment the man gave a strong pull, the horse started off as if nothing had been the matter. The philosophy of this seems to be that the animal, thrown off the centre of gravity by the propulsion forward, is taken by surprise, and obliged to start. Try it. [Rural New Yorker.

N. D. REDPATH.

Hay Elevators.

Thomas F. Jarrett, of Horsham, Montgomery county, Pa., has made some useful improvements in Hay Elevators, for which he has taken measures to secure a patent. In general character and appearance it resembles those in common use. But by means of a simple arrangement of a lever, catch, pulley, ropes, and weight, the elevator is brought under the control of the operator, so that it is guided to its destination freed from its load, and re-adjusted with great facility.—[Scientific American.

Stock Raising.

The following are Lord Spencer's rules for the selection of male animals for breeding:

"The first thing to be considered in the selection of a male animal are the indications by which it may be possible to form a judgment as to his constitution. In all animals a wide chest indicates strength of constitution, and there can be no doubt that this is the point of shape to which it is most material for any breeder to look to in the selection of either a bull or a ram. In order to ascertain that the chest of these animals is wide, it is not sufficient to observe that they have wide bosoms, but the width which is perceived by looking at them in front, should be considered along the brisket, which ought to show great fullness in the part just under the elbows; it is also necessary that they should be what is called thick through the heart.

Another indication of what a good constitution is, is that a male animal should have a masculine appearance; with this view, a certain degree of coarseness is by no means objectionable; but this coarseness should not be such as would be likely to show itself in a castrated animal, because it thus might happen that the oxen or weathers produced from such a sire would be coarse also, which in them would be a fault. Another point to be attended to, not merely as an indication of a good constitution, but as a merit in itself, is, that an animal in itself should exhibit great muscular power, or rather that his muscles should be large. This is an unusual accompaniment of strength of constitution; but it also shows that there will be a good proportionate mixture of lean and fat produced from the animal, the muscles being that part which in meat is lean. A thick neck is, in both bulls and rams, a proof of the muscles being large, and there can hardly be a greater fault in the shape of a male animal of either sort than his having a thin neck. I am inclined to say that in the new Leicester breed of sheep, which is the breed to which I am accustomed, a ram's neck cannot be too thick. Other indications of muscles are more difficult to observe in sheep than in cattle. In a bull there ought to be a full muscle on each side of the back-bone, just behind the top of the shoulder blades; he ought also to have the muscles on the outside of the thigh full and extending down nearly to the hough. It will seldom happen that a bull having these indications will be found deficient in muscle. As I am writing for the use of farmers, it is quite unnecessary for me to attempt a description of what is considered a well-shaped bull or ram; it is obviously impossible to express in words what is meant by good handling. It is sufficient to say, therefore, that no small animal is fit to be used at all as a sire, whose handling is not good; and that the more perfect his shape the better."

Flax Culture in Indiana.

Mr. R. T. Brown, of Crawfordsville, in a communication to Gov. Wright, President of the Indiana State Board of Agriculture, says:

"I send you enclosed a few samples of flax cotton presented to me by the H. L. Ellsworth, of Lafayette." Mr. Ellsworth has secured the machinery necessary for the manufacture of cotton, and will have it in operation early in the season. He has on hand the stem grown on 120 acres last season, which, from experiments already made, will, he supposes, yield about 300 pounds per acre of cotton similar to No. 2, of the enclosed specimens. The expense of reducing the fibre to this state, after the stem is pro-

duced, is about two cents per pound, which, at the usual price of cotton (10 cents,) will leave eight cents per pound, or \$24 per acre for the farmer who produces it. To this must be added the value of the seed, which will range from \$6 to \$8 per acre, giving a final result of \$30 at least for each acre. This is Mr. Ellsworth's calculation.—[Scientific American.

Blooded Stock.

Recently it was noticed that a large and valuable lot of English blooded stock, cows, sheep, &c., arrived at the port of Philadelphia, in one of our packet ships from Liverpool, on their way to Kentucky, for parties in that State who had imported them. They belonged to the Northern Kentucky Importing Association, and were procured for them by their agents, Messrs. Dudley, Garrard and Van Meter.

On Thursday, the 18th inst., the animals were sold at public auction, on the farm of Brutus I. Clay, in Bourbon county, and attracted a larger assembly of people than was ever gathered at any previous occasion of the kind in the State. As a principal feature of the sale, we may mention that the bids were restricted to citizens of Kentucky, and the purchasers were required to give bond not to remove the stock from the State for twelve months. It will, therefore, be seen that this was solely an attempt to improve the stock of Kentucky by the introduction of these superior breeds. There were 10 bulls, 15 cows and heifers, all of the short horned, pure blooded stock; 1 horse, and 8 sheep of the Southdown, Cotswold and Leicester breeds. All of these are of the best description, and are regarded as invaluable acquisitions.

By the published list, it seems that the successful bidders were from Fayette, Bourbon, Clarke, Woodford, Scott and Franklin counties, all in the vicinity of Lexington. The prices were remarkable. One bull brought upwards of \$6,000; a heifer upwards of \$3,000; a ram upwards of \$1,090; and the horse \$2,800. The whole cost of the stock, importation and transportation included, as they stood at the farm, was \$23,000, and the total proceeds of the sale amounted to \$65,976, being a nett profit of \$32,976; so that, as a mere speculation, this was truly a profitable venture, yielding a return of nearly one hundred and fifty per cent. upon the capital invested. It will, doubtless, lead to similar undertakings in other quarters.—[North American.

Save the Dead Leaves.

If every Horticulturist would reflect for a moment on the nature of fallen leaves—which contain not only the vegetable matter, but the earthy salts, lime, potash, &c., needed for the next season's growth—and that, too, exactly in the proportion required by the very tree and plant from which they fall—nay, more, if they would consider that it is precisely in this way, by the decomposition of these very fallen leaves that nature enriches the soil, year after year in her great forest, it would scarcely be possible for such a reflecting Horticulturist to allow these leaves to be swept away by every wind that blows, and finally be lost altogether. A wise Horticulturist will diligently collect from week to week, the leaves that fall under each tree, and by digging them under the soil about the roots, where they will decay and enrich that soil, provide in the cheapest manner the best possible food for that tree. In certain vineyards in France, the vines are kept in the highest condition, by simply burying at their roots every leaf and branch that is pruned off such vines, or that falls from them at the end of the season.—[Horticulturist.

New Rochelle Blackberry.

The following account of this new Blackberry, we find among the proceedings of the New York Farmer's Club. In the cultivation of new-seedling fruits, the Blackberry appears to have been lost sight of, this variety being a chance production. It has been found that our native Blackberry improves greatly by cultivation, and in the neighborhood of large cities, farmers would find an acre or more of plants, obtained from the woods, set out in rows, so as to admit of the passage of the cultivator, and kept free from weeds, would be very profitable. There is no more wholesome fruit, and it is used in such a variety of ways, that the demand is very great.

A splendid specimen of the Blackberry was presented to the Society, by Mr. Lawton, of New Rochelle. Many of the berries were from three to four inches in circumference. A large basket of them were partaken of by the members, and their rich and luscious pulp was duly praised: Mr. Lawton named the fruit "The New Rochelle Blackberry," but on a vote of the members of the Club, the name has been changed to "The Lawton Blackberry." A vote of thanks from the Club was also tendered to Mr. Lawton. The following paper was read by Mr. Lawton:

THE BLACKBERRY—To which I have before called the attention of the Club—has been cultivated in small quantities for several years in New Rochelle, Westchester county, where I now reside. I have not been able to ascertain who first discovered the plant, and brought it into garden culture, but I am informed it was found on the road side and from thence introduced into the neighboring gardens. As it came to me without any name to distinguish it from the Wild Bramble, I beg leave to introduce it to the notice of the Club as the "New Rochelle Blackberry," and at the same time, present as a specimen a few quarts of the fruit, gathered this morning, precisely as they came from the bushes without being selected. I have examined many works with a view to ascertain if there has been any improvement on the well known wild varieties, but without success. The "Double Flowering," "Dwarf," or "Dewberry," "American Upright," and the "White Fruited," are all that are named. The Dewberry is the first to ripen, and the best flavored fruit. The White Fruited seems to be cultivated as a novelty more than for the fruit. The Upright variety fruit, late in the season, is of vigorous growth, and under favorable circumstances produces large mulberry shaped berries; but the seeds are not thickly bedded in the pulp, and are so abundant as to impair materially the quality of the fruit. This plant seems to adhere to its original character with singular tenacity, or from the many millions of plants which spring up from seeds annually distributed in almost every diversity of climate and soil, we should constantly find new varieties. Improving the wild plant by careful cultivation is one thing; to produce a new variety is another. The fruit now before you, I believe to be of the last named character. It is not like the Dewberry, or long and mulberry-shaped like "Upright Blackberry," and the seeds are so completely imbedded in a rich pulp as hardly to be noticed. I think in shape and size they compare very well with the Hovey Seedling Strawberry.

The "New Rochelle Blackberry" sends up annually large and vigorous upright shoots with lateral branches, all of which, under common cultivation, will be crowded with fine fruit, a portion of which

ripen daily in moist seasons for six weeks. My plants have ripened from the 20th to 30th July, until 1st to 1th August. They are perfectly hardy, always thrifty and productive, and I have not found them liable to blight or injury by insects.

It will be many years before our citizens generally will be able to procure this fine fruit, as our large hotels and saloons will contract at high prices for all that can be sent to market. But numerous private gardens may be stocked for family use in three or four years, and in their turn aid in the distribution. Except that they are perfectly hardy and need no protection in winter, the cultivation may be the same as the Antwerp Raspberry, but to produce berries of the largest size they should have a heavy damp soil and shade.

Hen Roost Guano.

Every man who keeps a hen, has a small guano factory, which may or may not be made useful to him, accordingly as he uses his factory prudently or carelessly.

What is Peruvian guano? The droppings of sea-birds that flock about the islands on the Peruvian coast. These droppings having collected there for hundreds of years, and there being but little rain to wash it away, an immense quantity of this material is there found, and is now being brought to England and this country, by the ship-load. Were it not for the snows and rains on the coast of Labrador, and on some of the islands on our coast, the same material could be found in abundance there.

By keeping your hen on the roost, or keeping her guano under cover, you obtain as good an article, probably, as the Peruvian.

Mr. A. Todd, of Smithfield, R. I., speaking of his "home made guano," in a recent number of the New England Farmer, recommends to empty the ashes from the stove and fire-place, into the hen-roost, and with the addition of plenty of sandy loam, mixed as of course it will be, with the droppings of the hens, an excellent manure, equal to guano, would be made. He thinks, from a flock of thirty hens, half a cord of good manure could be easily made, which would be equal to a cord of stable manure.—[Maine Farmer.

Saving Seed from Garden Vegetables.

The first vegetable peas or snap beans that appear, save for seed; the first stalk of okra that shows a pod, let it all go to seed; the first cucumber, squash or melon, save for seed. In this way we may succeed in getting much earlier vegetables than by following the usual method of taking the refuse of all our garden crops for seed. Our egg plants might be brought into bearing much sooner, if we would save the first for seed. Who can stand it, with all the long year's dearth of delicious morsels, to save the first roasting ear or tomato, that may appear for seed, and yet if we would bring forward the whole crop two or three weeks earlier, it must be done. Let it be a settled maxim of the gardener—the first and best of every thing for seed.—[Soil of the South.

The Stuyvesant Pear Tree.

This pear tree which was planted in New York, by Gov. Stuyvesant, 'two hundred and sixty years ago,' on the spot which has since become the corner of 13th street, and 3d avenue, is still flourishing and fruitful.

The Advantages of Railroads.

A meeting of the Farmers' club, was recently held in New York. After some desultory conversation on the regular subject of the day—the benefit of railroads to agriculture—was taken up.

Solon Robinson, the proposer of the question, remarked that he would say a few words by way of introduction of the subject. The principal object I had in view in calling up this question was to get them to think how much agricultural improvement is dependent upon and benefited by railroads. Places that were almost desert and worthless barrens, have been rendered productive, and lands increased in value more than the whole cost of the road.

Farmers often think, when a road is first talked of, that it will ruin their farms, but after it was once in operation, and they find how convenient it is to send every thing eatable, (for every thing is eatable in the city,) by the cars, they would be very unwilling to do without its benefits; yet they do not, I think, properly appreciate the benefits of railroads to agriculture. In this city we are very dependent upon them for our daily food: In one week, beef cattle are transmitted from their native prairie-home in Illinois to this city. By the ordinary mode of travel they would require from sixty to seventy days. Milk, too, is brought on the Harlem Railroad from Chatham Four-Corners, 130 miles north of the city. Land along that road has risen from \$25 and \$30 an acre, to \$150. Every kind of produce can be sent fresh every day the same distance. Tons of blackberries are gathered from every nook and corner among the rocks and hills adjacent to the railroads, which but for the facility they afford, would have gone to feed the birds instead of human stomachs.

When railroads were first projected, farmers, who used their own wagons to go to market, cried, "we shall be ruined," yet the more these lines of transportation are extended into the country the more produce they bring from distant places, the more saleable their own becomes and at higher prices. Railroads are not only beneficial to agriculture, but to civilization and the progressive improvement of the whole human family.

Judge Van Wyck made some remarks, and was followed by Orange Judd, Esq., one of the Editors of "The Agriculturist," who said he thought the subject was somewhat misconceived about the opposition of farmers to railroads. He thought that farmers generally were in favor of the building of railroads.

Professor Mapes thought very differently—that the strongest opposition almost every where did exist among farmers against the laying out of railroads, and that after they were in operation they did not appreciate the benefits to agriculture which railroads always conferred upon every community through which they are constructed. Those who are not well posted upon the subject are not aware how inefficient the Jersey railroads are to bring in the market garden vegetables along the lines. The companies seem to think that if they accommodate the passenger business, it is all that is required of them. One of the benefits to farmers is to make known to them the improvements of others. Look at another benefit—the bringing together of the vast numbers of agriculturists at our annual fairs. Many people for the first time see things that they never before had thought of, and they go home with improvement so stamped upon their minds that they cannot but progress. In fact, we are almost entirely indebted to railroads for the ability to hold these fairs. These farmers are induced to meet from all parts of the

country by the ease with which they reach the spot by railroads. It is incalculable how much these meetings improve our farm products. New or better vegetables are seen, which induces men to procure the same kind of seed, whereby the production of a whole neighborhood, after a few years, is increased.

Talking of milk by railroad—what would this city do for milk without that which comes by them, and which could not be obtained in any other way. I saw yesterday morning, when the Erie railroad milk train arrived at Jersey City, several large cars full of milk cans. I was pleased with the remark of Mr. Robinson about the cattle by railroad, and that fresh beef could be brought a thousand miles perfectly fresh in winter, thus leaving all the offal where it is wanted to fertilize the land. Fertilizers, too, are conveyed by cars to places where they are much needed, but would not pay for cartage. Thus production is increased. Where could you find room in this for all the wagons that would be required to bring the produce necessary for daily consumption.

I see by the report in "The Tribune" this morning that 22,000 animals for slaughter arrived last week. Mr. Robinson states that most of them came by railroad.

The peaches carried last Summer by the Camden and Amboy road, at eight cents a basket freight amounted to \$1,400 a day.

The increased use and benefits of railroads, is increasing every day.

Sugar of Milk for Invalids.

A short time ago, Dr. Turnbull, of Liverpool, read to the Literary and Philosophical Society a paper on the use of sugar of milk as an article of food in consumption and other pulmonary diseases. It now appears that whey is coming into extensive use in Germany, in the treatment not only of consumption, but also of gout and rheumatism, and that some German physicians entertain opinions as to the beneficial properties of sugar of milk, (the ingredient to which whey owes its virtues) similar to those lately put forth by Dr. Turnbull. In the cheese dairies of this country the whey is frequently given to pigs, or otherwise wasted, and the lactine, or sugar of milk, now met with in commerce, is brought entirely from Europe, being prepared chiefly in Switzerland. Its present high price is, however, a great obstacle to its general use as a dietetic remedy; but it is most desirable that so valuable an article of food should no longer be wasted, and that therefore the attention of those engaged in making cheese should be directed to the manufacture of this other product from milk, which must sooner or later become an important article of food and of commerce.

Wool.

The Wool crop of Mercer county, Pa., for the present year, is estimated at 200,000 lbs.; which at the prices which have been obtained, will be worth about \$30,000.

Price of wool have varied from forty-two to forty-eight cents, averaging forty-five cents.

Never keep animals on a short allowance—if you starve them they will surely starve you.

For the Farm Journal.

Strawberry Question.

FLUSHING, Aug. 10th, 1853.

MR. EDITOR:—

It is of little use for man to reason in regard to natural objects, unless his mind has first become fairly matured, and has attained to the conclusion, (the most evident of all things,) that the Deity has prescribed a supreme and immutable law, beyond the confines of which there can never be any divergence. It is this eternal law which renders palpable and positive to our senses, the now unveiled facts of Geology, whose eternal impress of countless ages, bids the mind to scorn and condemn all the contradictory averments of frail man. The Deity, when placing man upon the earth, exercising both love and justice, generated within him an unerring guide, whenever he should call into exercise its unprejudiced perceptive and reflective powers.

The study and contemplation of the vegetable kingdom, with an ardent devotion for fifty years, have matured the conviction of my mind, that the Creator has been equally mindful of the humblest plant, and of the microscopic insect, as of the mightiest developments of his power; and in the pursuit of this and other studies, I have realized the fact, that all nature is replete with order, wisdom, harmony, and love.

Any question, therefore, inculcating a derangement of this supreme order and harmony, has already received its solution in my mind. In referring to the supreme law, it has been most eloquently remarked, by an American orator, that if gravitation were suspended but for a single moment, all nature would sink into chaos; and it may with equal truth be asserted, that if the eternal law of sexuality were susceptible of variation, there would be no end to the confusion of the races of animals and plants, and all creation would become a heterogeneous and disorganized mass. And although the test of "long experience" is scoffed at by Mr. Meehan, I may still deem it worth something, when all my intelligent friends have arrived at the same conclusions as myself.

In penning my previous communications, I am not aware that I have used any unbecoming language, but I must plead guilty to somewhat impatient feelings, when I see a man professing to impart information to others, commence his operations with a palpable blunder, one equally inexcusable, whether from error or ignorance, and then attempting to palm upon the community through the medium of an intelligent Society, the erroneous results of his blunder as positive facts, arraigning the systematic harmony of nature; although happily the discernment of the Philadelphia Society passed over the subject without notice. Mr. M. should also be aware, that there are some statements and assertions, which are too weak and contemptible to admit of serious argument.

I will now proceed to discuss the points advanced by Mr. Meehan and by W. D. on the Strawberry Question, the former of which are evidently based in error, and in a confusion of *both* facts and ideas, whilst the latter has erred from misconception, and a consequent misapplication; and I respond thereto, notwithstanding I have just received a letter from the oldest and most distinguished Pomological Editor in the Union, (dated Boston,) urging me to drop the discussion as useless, since it so evidently originated through Mr. Meehan's erroneous selection of two mixed varieties in his experiments.

You will perceive that this same position was taken by me at the commencement, and also by Mr. Longworth, viz: that Mr. M. had begun with a blunder in the plants, the same as Mr. Downing had formerly done, and like the latter, he had not candor enough to acknowledge his error. I trust, however, that Mr. M. will revise his operation by a new trial with genuine plants, and in such a way that there may be no room for mistake, or doubt, and all I ask of any other person is, that he will make the test for himself. Surely if Mr. M. ever did accomplish what he says he did—that is, *change pistillates to staminate*, it can be done again, for wisdom did not become extinct with his first experiment. And this last remark seems most amply verified by the disclosure of his manifest ignorance when attempting to describe what Hovey's Seedling really is, and his acknowledgement, that one of his finest beds of Hovey's Seedling, (so called by him,) was declared by others to be Buist's Prize, or some other hermaphrodite variety; when the former is most strongly marked, and the best known of all strawberries, and any child ought to readily distinguish the latter by its double height, long petioles and peduncles, distinct foliage, and numerous flowers, to say nothing of its differently formed fruit and sexuality. And in his communication in the Horticulturist, he further acknowledges having planted for Hovey's Seedling a bed of Burr's New Pine, two years ago, which was about the period when the blundering commenced; and yet he has the assurance to ask of us now to believe in his immutable accuracy. The strongest argument of all, is his acknowledged mistakes, showing his plants and his ideas to be equally confused.

In regard to one of McAvoy's strawberries referred to, as having staminate and pistillate flowers on the same plant, such is the case with a staminate seedling that has come mixed in with some parcels of McAvoy's Extra Red, and also with at least a dozen other varieties; and forms one of the phases of the hermaphrodite class, among which are the Duke of Kent's Scarlet, Eberlein, Triumph and others. The flowers of the two sexes are sometimes on the same scape, and sometimes on distinct scapes.

It seems that Mr. M. and W. D. not being aware that part of the hermaphrodite family possess this

character, came to the conclusion that the plant they saw was an anomaly or sportive variation; whereas, that peculiar character is as permanent and invariable as the other classes.

I have letters just received from Mr. Longworth and Mr. McAvoy, confirming my views as to the invariable sexual character of the *true* Extra Red, and referring also to the spurious seedling I have named. And as to the mention made by Mr. M., that Mr. Longworth stated to him in regard to the Extra Red, "that it is the first instance *that has come under his observation* of pistillate kinds producing hermaphrodite flowers." Mr. Longworth says in a letter to me, of the 8th inst., that *no such fact has come under his observation at all*. And such is the response of the gentleman whom Mr. M. quotes as having "raised that variety in his own garden, and under his own *acute observation*." Mr. McAvoy goes a little further, and after the most positive denial of any sexual variation, says, I will give \$50 to Mr. Meehan, or any other person, who will change it to a staminate, and I think I know a person who will give a great deal more, *but I would select the plants myself*."

To settle the question of apparent "evasion," I will refer at once to the point in dispute. In the first place, Mr. M. stated *he had changed pistillates to staminates or perfect flowers*, by special culture as there stated. Now if flowers do thus change and become perfect, they will of course, produce fruit, that result being the only decisive test that they are perfect; and such was doubtless his meaning and actual belief, when he made his first communication, as will be evident by referring thereto, wherein he asserts, "the distinction between staminates and pistillates to be worthless, cultivation producing either the one or the other."

But in his second communication (June,) he still adheres to the same opinion as to the transmutation of sexes, but abandons what he at first declared to be the cause, and says "he may be in error in his opinion that the change from one sex to another, was the result of cultivation." I responded, denying his premises and his alleged facts. And he having at last discovered that pistillates grown separately will not produce fruit, backs out entirely from his other position, and when I offered as a decisive test a large premium for "one perfect berry from Hovey's Seedling grown by itself," he remarks, "*Who said they could do any thing of the kind?* Was there ever greater subterfuge and evasion? I answer that he himself said so, and meant so, in his original communication; for if he did not mean that, what did he mean, or did he mean nothing at all?"

I ask then, if this query of his does not amount to a complete recantation, and an admission of the truth of my entire position? I don't much like this slipping out by degrees and by stealth, but if Mr. M.

will back square out, I shall be satisfied, for the public will then know what to believe.

Mr. M. attempts some cavil in regard to Mr. Downing's having committed a similar blunder to himself, but the facts are too transparent to be misunderstood. It is not true as Mr. M. asserts, that "Mr. D.'s observations led him to the conclusion that Hovey's strawberry would by culture, become a hermaphrodite," for he had never possessed Hovey's Seedling when he made his erroneous statement. I well remember the circumstance, for immediately after his article appeared, I jumped on board a steamer and visited his grounds, and asked to see the bed of Hovey's Seedling, when, to my amazement, I was shown a very tall growing variety, with narrow oblong pointed leaflets, of a pale green color, long scapes, large and numerous flowers, and totally distinct from Hoveys in these and all other points as possible.

I was astounded at such a solution of the mystery, but said nothing. I obtained a few plants from that identical bed, which I brought home, and planted, and tested to my satisfaction. Immediately on my return, I announced to Mr. Huntsman and some others, the fact, and we had a most hearty laugh over this mouse from the mountain, and shortly after came forth the same miraculous disclosure by the Boston Horticultural Society. The further assertion by Mr. M., that this Society "decided that the kind was not Hovey's because it was a staminate," is also untrue. They decided that it was not Hovey's, because it had no one character in foliage, flower or fruit, or bearing any similitude to Hovey's. Any Yankee child escaped from its cradle, would have come to the same conclusion. Mr. Downing was too shrewd not to feel the effect of so gross an error, and although, as Mr. Longworth says, he never publicly corrected it, as was his duty, he nevertheless gave the most complete proof of his own conviction, by carefully abstaining from any re-assertion of his erroneous position to the time of his death, and always seemed very desirous to keep *shady* on this point. I regret that Mr. M. should deny to him the exercise of ordinary shrewdness, by stating that Mr. Downing could never be made to understand the blunder.

Mr. M. refers also to a wager, but I have offered none. I did offer to pay a certain sum to any one, to do what he had declared he had done with ease, but without any possible gain to myself. Mr. M. should consult a dictionary, and correct his definition, for even poetry becomes foolery when it has no application. Mr. Longworth made an offer for a hermaphrodite produced by cultivation from a pistillate plant. I made an offer for "one perfect berry from Hovey's Seedling grown by itself." Now as all hermaphrodites produce fruit, the result would be identically the same, and as Mr. M. can so easily change pistillates to staminates, "*by being forced slow-*

ly in a moderate temperature," he ought to set about it at once, and obtain the reward.

In regard to the communication from W. D., it seems very apparent that he has not taken into consideration the fact that the distinctive variations of the strawberry, as staminate, hermaphrodite, and pistillate, constitute the *normal conditions* of the the plant, and that consequently any change of the primitive character would be a transmutation of the identical description which he so forcibly rejects, and whose impracticability he has so lucidly expounded.

It can, therefore, bear no affinity to his quoted instance of variation in the "floral organs," arising from luxuriant culture, and their consequent susceptibility to further change.

Large and luxuriant foliage, when resulting from excited vigor, are precisely in accordance with an increase in the size or plurality of the petals, and this increase often renders flowers so double as to usurp the position of the sexual organs, and thereby prevents the production of seeds, but without in any way affecting their sexuality. As well might the development of fatness on a well-fed animal be confounded with a change of his sex.

And whilst on this subject, I would ask of W. D., in his discussion of the sportive results of culture, which are applicable to so many plants, to designate a single instance where it has resulted in a change of sex.

In regard to this question of sexuality, the strawberry is the very last plant that should have been assailed, for so distinct are the natural varieties, that staminate and pistillate plants may be almost invariably distinguished by simply comparing the number of flowers on the scapes, and even by the size of a single flower, without seeing any other part of the plant.

Mr. G. W. Huntsman can tell the sex of more than fifty varieties of strawberries by the leaf alone.

The sexual distinction in the scapes taken from the same plant, to which W. D. alludes, and which I have explained, in a previous paragraph, might well strike a casual observer as an anomaly, when not apprized of its constitutional character, but it could present no excuse to one who has been long pursuing the strawberry culture. And W. D. is greatly mistaken when he says, "It is this kind of change in the character of the flowers which I understand Mr. Meehan to announce as having occurred in plants, under his management." Mr. M. says no such thing, but distinctly states that *his pistillates changed to staminates or perfect flowers*, and in fact he had no knowledge when he wrote his first article, that any variety possessed the characteristics of the new seedling from McAvoy, but in May, when he first saw its bloom, he seized upon what he deemed a God-send, hoping it might answer as a scape-goat to sustain him in his erroneous dilemma, and he imme-

diately dispatched specimens to W. D., a highly accomplished botanist, but not specially advised as to the varieties of the strawberry, for the purpose of courting his aid, and thus he misled that gentleman, by being first duped himself, in a matter which he ought to have been fully conversant with for a very long period, as the Duke of Kent's Scarlet, and others possessing the same character, originated in his own country, (England,) and are enumerated in the London Horticultural Society's catalogue of 1826, and had been under culture there for many years previous.

It further appears that what Mr. M. speaks of as, "*the able article of W. D., which so clearly sets forth his ideas*," was in fact based on a mistaken conclusion, from an inspection of the scapes of the new strawberry from McAvoy, sent to W. D., by Mr. M. in May, but which neither party had ever seen a flower of at the time when Mr. M. penned his original communication, which was in the month of March. *Oh! tempora! Oh! Mores!*

It will therefore be seen, that this seeking shelter under the wing of W. D. will not absolutely prove of avail, and neither will the still more astounding circumstance, that the arguments and comments used by W. D., in the July number of the Farm Journal, comprising points which Mr. M. had never thought of advancing, are found embodied in an article from Mr. Meehan himself, in the August number of the Horticulturist, *as original and without any credit to their author.*

In concluding my comments, I will simply state, that I have cultivated all the important varieties of the strawberry for a very long period, and during the last ten years with especial attention, and I have now above one hundred and fifty varieties in my grounds, and yet, after the closest scrutiny by myself, and my neighbor, Mr. Huntsman, we have never been able to discover any sexual variation whatever.

The real causes for the discussions on this subject, have arisen from the rapidity with which runners pass from one bed to another, and the frequency of seedling plants springing up in beds differing from those already growing therein. In fact you can scarcely go into any garden without finding some accidental mixtures from these causes.

As Mr. M., in his attempt to describe Hovey's Seedling, has shown his utter want of reliable discrimination, I will define its immutable character. Hovey's Seedling is a plant of low growth, and very distinct appearance, remarkable for its large, round, deep, glossy, green, luxuriant foliage; the petioles and peduncles short, the flowers of medium size and not numerous, pistillate, with rudimental abortive stamens, very productive, fruit too well known to need description.

Having now taken some pains to enlighten Mr. M. as to the real facts of the case under discussion,

I trust he will readily acquit the strawberry plants of all vascillations, and concede that they only existed in the visionary mind of the observer.

Yours most respectfully,

WM. R. PRINCE.

N. B.—Mr. Longworth has just advised me that he has "corrected Mr. Meehan's error, about his views of the sexual character of the Extra Red, in *Warder's Horticultural Review*."

W. R. P.

We commend the following excellent article to the particular attention of our readers. The cherry is more difficult to transplant successfully than any other fruit tree.

For the Farm Journal.

Culture of Cherry Trees.

Messrs. Editors:

There is an opinion, and it has been expressed in the *Journal*, that cherry trees are more difficult to transplant than other fruit trees. With the same mode of procedure they certainly are, but if treated as the constitution of the tree requires, they live and grow as certainly and as freely as an apple tree or a plum tree.

The chief difference results from the tenderness of the roots of the cherry tree. They do not bear exposure to dry air, nor the least touch of frost; nor can they bear to stand in wet ground, or in a wet hole in the ground; nor will the tree bear to be wounded late in the Spring, after the buds swell in March; grafts will not grow if set after that time, though they grow quite freely if inserted before; nor will it answer to raise or dig up the tree so late for transplanting.

As the roots do not bear to be set deep into the cold wet ground, and it being their natural habit to run along close beneath the surface, they must of course be planted shallow.

The necessity of observing the following directions will be apparent from what has been said, and is proved by experience.

Raise the trees in the Fall if possible, (in Oct. or early Nov.,) immediately coat the roots by plunging in mud, or covering with light dry soil, if not to be carried far. If the soil where they are to be planted is not very loose and dry, choose a spot in the garden or elsewhere, and bury the roots, there to remain till Spring; fill the fine mould among the roots and heap enough over them to ensure against frost or wet, for they are quite as tender as potatoes. Plant early in the Spring; take out only one tree at a time; prune the bruised ends of roots to sound wood, and immediately place it in the previously prepared shallow hole, and filter in enough fine mould to cover the roots; so proceed with the others, and afterwards fill the holes. In all this, let it be a main care to avoid exposing the roots.

Now to prevent their drying up, and suddenly dying in the Summer, lay on a thick, wide mulching of straw, or other litter, and if the stem is tall, sheathe it with long straw; but the trees are far better if they branch low, so that their foliage will shade the stem and roots, and so that the sap has less distance to make its way up the continually drying stem—for this reason avoid large tall trees for planting.

By no means remove a leaf from any part of the tree during the first Summer. Before planting, read the article in the *Journal* for 1853, vol. 2, p. 354, and vol. 3, p. 12. The latter article (by A. W. Corson,) should be studied by all who are planting fruit gardens as it bears the marks of veteran acquaintance with the subject.

With this care it is one of the easiest things to establish a grove of cherry trees. Once set, they grow rapidly; they flourish on the poorest and thinnest soils. The fruit ripening early in the Summer; the tree seems to become recuperated by the Autumn growth sufficiently to enable it to bear a full crop the next season; yet the tree is benefitted by culture, equally with others; grass and weeds interfere seriously with the shallow running roots, and greatly reduce the size and amount of the fruit.

Although cherry trees are but little liable to disease or injury by insects, they are not exempt, or they would be the only exception to the decree that went forth at the expulsion of our first Parents, from the garden prepared for them, and which imposed toil among thorns and thistles as the future price for every thing it contained. Cherry trees suffer, when young, from aphides, (destroyed by tobacco water,) and slugs, (destroyed by dusting with lime or ashes.) The roots are often eaten by worms, and the trunk, if exposed, is liable to split, especially in the West, and in low rich ground Eastward. The best preventive course is to allow the trunk to be shaded by its natural screen of foliage, and this course also adds greatly to the beauty and productiveness of the tree.

The cherry being a transient fruit, many are required to form a succession; and taking into consideration the different flavors, seasons, adaptedness for cooking, &c., a proper assortment cannot be composed of any less than twelve or fifteen different kinds. For the same reason it is not advisable to plant many of one sort, unless intending for market; many of the kinds require but little space, especially if grown on dwarf stocks. Dukes in this form, require but six or eight square yards. Large growing standards require thirty to forty.

WM. G. WARING.

Near Boalsburg, Centre county, Pa.

Although in draining land thoroughly, your purse may be drained, yet the full crops that follow, will soon fill it up again.

For the Farm Journal.

Gapes in Chickens.

MR. EDITOR:—In the July number of the Farm Journal, a correspondent asks a cure for that plague of the poultry breeder—"gapes." Now every one who has suffered in this wise has doubtless "tried every thing," but without success, or rather without obtaining a specific—and as there is no such thing as this among the human race, there is probably none among the race of chickens, for I imagine that chickens have their idiosyncracies as well as men. But without further preface, I will give you the result of my small experience in this matter, premising that, the treatment is not original with me, although I cannot remember whether I heard or read of it, I think the latter. No one, however, to whom I have mentioned it seemed to have been aware of its efficacy, which, with me at least, has hitherto been certain, although justice requires I should say, that there are some who have tried it at my recommendation and, as they allege, without success.

The chicks should be kept away from the barn-yard, and be supplied with pure, clean water, which I deem to be necessary, although some contend that the moisture contained in the food given them is sufficient; dirty water, particularly "barn-yard water," is a certain cause of the "gapes." Your August correspondent's means of *prevention*, are good beyond question, and entirely conformable to my own views, and inasmuch as "an ounce of prevention is worth a pound of cure," would seem to leave no more to be said; but your July correspondent asks for a *cure*, meaning, of course, the removal of a disease which exists, no matter how acquired.

The plan I have adopted, is to take the chick and push a camel's hair pencil, or partly stripped feather, dipped in turpentine, down through the gullet into the crop, and turn it therein two or three times, on withdrawing it, a number of small worms, the cause of the disease, will probably be brought away; this may be repeated the following day, once, however, usually suffices. The first time I tried it was on the kill or cure principle, and meeting with entire success, on a very bad subject, I have continued, when there was occasion for it, the use of the same means, and so far without losing one operated on.

If you deem this of sufficient interest to claim a space in your useful, practical Journal, I shall be pleased that a remedy in which I have faith, should have so extended a circulation as it will thereby obtain.

At a future time, if you should permit me, I will give my views upon poultry raising in general, and as every body thinks their method best, I certainly have no wish to be singular, and therefore would only do it for the benefit of those who have, as yet, *no method*.

P.—Gwynedd, Aug. 20, '53.

We hope our correspondent will give us his views on Poultry raising.—[Ed.]

Garget in Cows.

MESSRS. EDITORS:—

At the solicitation of a friend, who has saved a valuable cow from the hands of the butcher, I am induced to make known through your columns a remedy for the garget. Some years since I met with a fine imported Durham cow, on the way to the butcher, the owner parting with her in consequence of her being afflicted with the garget. The owner had tried all the usual modes of eradicating the disease, after which he put her under charge of a distinguished Veterinarian, who, after a six months' attendance, discharged her as *uncurable*.

Deeming her a good subject for a treatment with iodine, and not knowing whether it had been used in the case, I purchased her at what she was worth for beef. At that time she gave but a few drops of milk at a time from one teat, the other three having ceased to yield any—the udder and teats were swollen and hard. I determined to make use of iodine in the form of hydriodate of potash, being solvent in water, and if it failed to exhibit its effects on the system I would resort to an ointment, (20 grains iodine to 1 ounce hog's lard,) applied externally, to the udder and teats. I commenced by giving 10 grains of hyd. potash in a table-spoonful of water, three times a day, mixed in a mash of shorts and meal; and though the dose was unusually small for a cow, still, as it was giving unmistakable signs of effect, I did not increase the dose. In seven days she gave milk freely, from each teat, and in three weeks she was discharged as cured. The result in the foregoing case was so favorable, that I advised my neighbors who had cows afflicted with the garget, to make a trial of the same remedy. I have known of its trial in at least forty cases, and in every one the cure has been effected with even the above named small dose. A larger quantity could be used at a dose with safety.

Any one acquainted with the effect of iodine on the human system, knows its tendency to produce an absorption of the mammae. Dr. R. Coates, Philadelphia, reports a case in the "Medical Examiner," of the complete absorption of the female breast from iodine; but the mammae recovered their original development after a lapse of a year. Iodine is principally employed in diseases of the absorbents and glandular systems. (See U. S. Dispensatory.)

Hydriodate of potash can be procured of an apothecary, and dissolved so as to allow 10 grains to each spoonful of water, increasing the dose till it gives effect on testing the urine.—[Boston Cultivator.]

EBEN WRIGHT.

Dedham, June 25th, 1853.

Ram Letting.

Jonas Webb, a well known English breeder of South Down Sheep, has for several years been in the practice of letting his rams for the season, at public auction. His success has been very great, and if the prices he receives continue to increase, he may ere long rival the celebrated Bakewell. At his last letting, which took place a few weeks since, seventy-one sheep were let on an average of £22 4s.—equal to \$111 each—and one for 130 guineas, being the highest price ever brought by any of Mr. Webb's rams. This animal was bid off by Mr. Rotch—whom we presume is Mr. F. M. Rotch, of Morris, Ostego county, N. Y. At the dinner given by Mr. Webb, Mr. Rotch was handsomely complimented by the President for his spirit and enterprise, and replied in an appropriate speech.—[Boston Cultivator.]

APPLES.

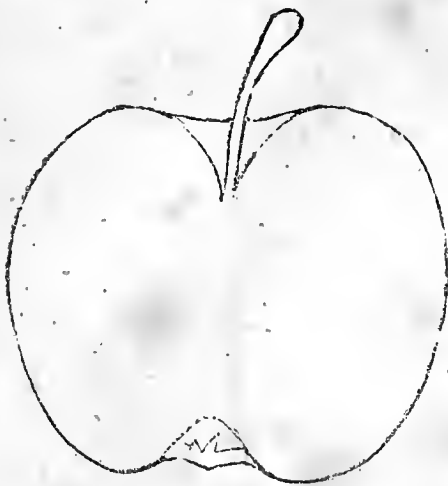


Fig. 1. Jonathan Apple.

Fig. 1. JONATHAN APPLE, PHILIP RICH, KING PHILIP OF SOME COLLECTIONS.—This is one of our most beautiful apples, and from its flavor, and productiveness is worthy of extensive cultivation:

It was brought into notice by the late Judge Buel, who described and named it after Jonathan Has-

bronek, from whom he first received the fruit. Its attractive appearance will always make it profitable for market. It comes into bearing early, and is very productive. The growth of the young wood is slender, and of a light brown color, with large terminal buds.

Fruit of medium size, regularly formed, roundish ovate or tapering to the eye, skin smooth, the ground clear light yellow, nearly covered by lively red stripes, shaded with crimson or purplish red on the sunny side; stem one inch long, rather slender, curved and deeply sunk in a regular cavity; calyx set in a deep, rather broad basin; flesh white, sometimes tinged with red, tender and juicy, with a rich, sprightly sub-acid flavor. November to April.

Fig. 2. ESOPUS SPITZENBURG.—This rich and highly flavored fruit originated at Esopus, on the Hudson, a district rather celebrated for its superior apples. It is ranked by many as equal to the Newtown Pippin, and as unsurpassed by any other variety. Large orchards of it are growing in New York State, and the continued popularity and great demand for it in our Eastern cities, with its uniformly fair appearance, renders it one of the most profitable for orchard culture.

The tree is rather a slow grower, of upright habit when young, with slender shoots, but having long

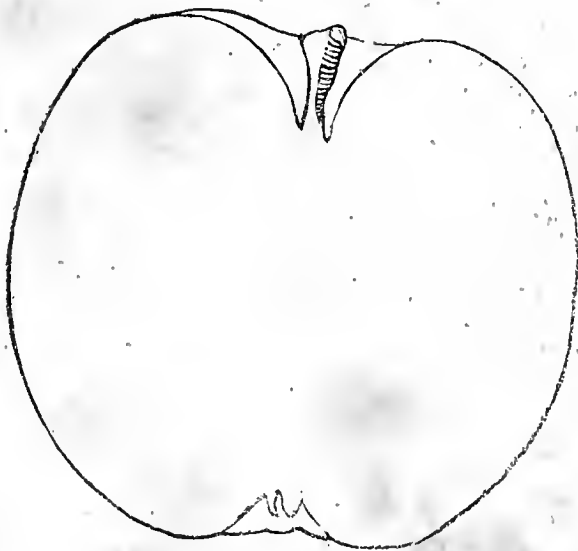


Fig. 2. Esopus Spitzenburg.

pendulous branches, when in full bearing. Bears moderately. Fruit large, deep red with gray spots, oblong, tapering to the eye; skin smooth, deep red, lively, with indistinct red or crimson stripes; stem three-fourths of an inch long, slender, deeply inserted in a rather wide cavity, calyx small, set in a shallow somewhat furrowed basin; flesh yellow, firm,

with a rich high flavored, somewhat spicy juice. November to February.

PEARS.

Fig. 3. BEURRE' BROWN, OR BEURRE' GRIS.—This old variety where it succeeds at all, still maintains the character it so long held, of being equal at least to



Fig. 3. Beurré Brown, or Beurre' Gris.

any other, and superior to most. It does not appear to succeed well in Massachusetts, but thrives in Western New York, and produces abundantly of rich high flavored, sub-acid fruit. In town and cities, where it has some protection, and in rich warm soils, it is well worthy of culture. Manning speaks of it "as one of the best of the old varieties." It succeeds finely on the Quince, bears abundantly, and is well adapted for the small garden.

Fruit large, oblong, obovate, tapering towards the stem, in a coarse manner; skin yellowish green, nearly covered with thin russet, often a little reddish brown on one side; stem three-fourths of an inch long, stout and obliquely inserted, thickening into the fruit; calyx set in a shallow basin, with reflexed segments; flesh greenish white, melting, very juicy, with a perfumed vinous flavor. September to October. Brown Beurre' is of French origin.

Fig. 4. BEURRE' GIFFART.—This is an early pear, ripening about the same time as Madeleine, and only introduced into the country within two or three years. It is of French or Belgian origin. We imported a few trees of it into Chester county last season, which did not fruit, but a friend of ours also imported some trees, from which he was fortunate in obtaining two or three specimens, and describes them as being of the highest quality, and a valuable addition to our list of early pears. It succeeds well on the Quince, has dark reddish wood, and rather small foliage. Hovey describes it as follows: "Size medium; form pyramidal, full at the crown, tapering to the stem, with a somewhat elongated neck; skin fair, smooth, yellowish green, pale yellow when mature, somewhat striped and mottled, with brilliant red on the sunny side, and dotted with pale russet specks; stem long, about one and a half inches in length, slender curved, and obliquely attached to the fruit, by a swollen and

lowish green, pale yellow when mature, somewhat striped and mottled, with brilliant red on the sunny side, and dotted with pale russet specks; stem long, about one and a half inches in length, slender curved, and obliquely attached to the fruit, by a swollen and

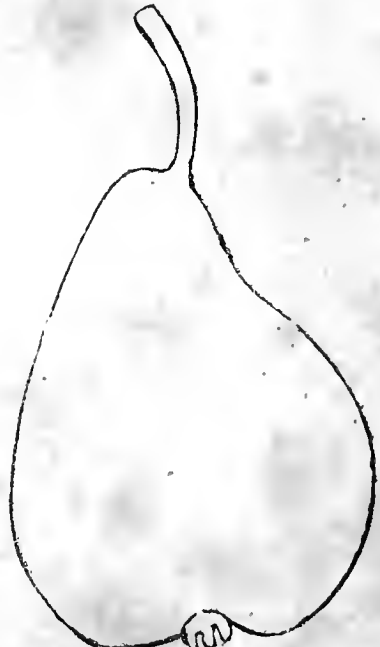


Fig. 4. Beurre' Giffart.

fleshy junction; eye medium size, open and very slightly depressed in a small basin; segments of the calyx,

short, stiff, projecting; flesh white, fine, melting and very juicy; flavor rich vinous and refreshing, with a spicy aroma; core, small; seeds obovate.

Cherry Festival.

The following account by Dr. Kennicott, taken from the *Horticulturist*, of the trial of Dr. Kirtland's new seedling cherries, at Cleveland, Ohio, was accidentally omitted in our last number. The test they were submitted to, was both just and severe, and as they withstood the trial so well, the Dr. may well be complimented for the very rare good fortune, unprecedented in this country, of originating so large a number of new and valuable seedlings.—The forthcoming book on fruits, by F. R. Elliott, will no doubt be posted up, with a minute and further description.

It is well known to the old readers of "The Horticulturist," that Dr. Kirtland has been long engaged in testing seedling cherries from the old Yellow Spanish, fertilized by Black Tartarian, American Amber, May Duke, and Arch Duke, and, possibly, other varieties; though these sorts grew beside the tree of Yellow Spanish, that furnished the seeds of these Kirtland Cherries, (which F. R. Elliott has occasionally described,) and many others, not yet brought into notice on account of the great reluctance of the Doctor to permit a fruit, not fully equal to the best, to get abroad before the produce of years has given repeated testimony in favor of the claims of the new candidate for notice.

The way the Doctor managed with us showed both sensitiveness and confidence. Mr. Elliott took us all up to Rockport before showing us the Cherries of his own planting; and there we found Dr. Kirtland, prepared to get a candid opinion from every one, not capable of determining the identity of a variety, when placed alongside of others the most nearly resembling it. Some twenty or thirty dishes of Cherries were arranged, designated by numbers alone; and as the variety passed round, we were required to enter the number, and write down our opinions against it; and at the conclusion of this examination, a number was called and we read off our remarks in succession—no one being excused—and then Dr. Kirtland announced the name of the Cherry, and gave its history; and though (as we knew) there were some half dozen sorts of the best old Cherries artfully arranged, so as to escape detection if possible yet, in nearly every instance, the *Kirtland Seedlings* were the ones selected as "best!" And what must have pleased the old Doc or better than this unbiased testimony in favor of his Cherries, we all selected as the best those sorts which are most esteemed by himself and F. R. Elliott.

In my blind notes, Mammoth and Délicate are set down as the very best; but the majority rated, about as follows:—Of the reds—Gov. Wood, Délicate, Kirtland's Mary, and Rockport Bigarreau; Belle d'Choisy being ranked as "best" in one instance only. Of the blacks—Black Hawk and Osceola were entirely ahead of any of the old blacks. The Doctor, and Logan, and also Joekosott, are down on my list; the "Doctor" is a very sweet Cherry, and all the blacks are, in some way, superior; but unfortunately, very few of them were ripe; and so some of the reds. And, by the way, there are some forty varieties in all; not one of which but is more worthy of cultivation than a large portion of the old world varieties.

And now, for the great point of worth, and the wonder of all—except my first favorite, the mammoth, which is a poor bearer, and possibly two or three others, not yet before the public—all of these thirty or forty seedlings are the most prolific of Cherries, beating the old sorts out of all comparison, in many instances, and beating them sufficiently in every case. The limbs were literally massed with fruit—and such fruit! Oh! you *should* have been there, friend Barry, for—although you are not in the habit of going off in ecstasies over every new thing—you are capable of appreciating excellence, and giving others just and sensible notions of the worthies of the day—among which I am inclined to rank the Kirtland Cherries pretty near the head of the list in Pomology. I feel grateful to friend Elliot for the chance of seeing and eating to repletion, these delicious productions of the West, and I assure him—as I now do you—that should his forthcoming book not go beyond the *Cherries*, even, it can not fail of interesting pomologists, the Union over.

Analysis of Soils.

Every observing farmer is aware, that there is a great difference in the agricultural value of soils, both as regards the ease with which they can be cultivated, and their natural capacity for growing good crops of corn, grain and grasses. This fact is much more observable in the hilly, rocky regions of New England, than in some other sections of our country. There are immense tracts of land in some of the Western States, that vary but little in their agricultural value, as far as their ability to produce such crops are concerned. So alike are these soils in their physical condition, mineral and organic composition, and mechanical texture, that fields of thousands of acres scarcely exhibit any difference in the evenness and quality of the corn, or other crops growing upon these extensive fields, when under the same course of cultivation. Such are the soils of the Miami and Scioto bottom lands of Ohio. In 1851, it was stated in the *Cincinnati Gazette*, "that on the Great Miami Bottom, about 25 miles below Cincinnati, there was one field (belonging to several owners) seven miles long by three miles broad, which had been regularly planted to corn for nearly half a century. In the Wabash Valley there were also extensive corn-fields;—one between Terro Haute and Lafayette, being ten miles long."

From the great and long continued fertility of the soil of the Scioto Valley, it has generally been supposed that that soil is vastly richer in the inorganic basis of a fertile soil, viz., potash, soda, lime, the phosphates, &c., than the soils of Massachusetts and New Hampshire.

Ex-Gov. Trimble, of Ohio, President of the State Board of Agriculture, says in the first annual Report, (1846) "that one hundred and fifty bushels of corn have been gathered from an acre, out of a field of one hundred acres, each acre of which was estimated to produce an equal number of bushels. This was an extraordinary crop, and was the result, no doubt, of extraordinary culture; but the fact that some of the bottoms on the Scioto have been cultivated forty-five years in corn without rotation or rest, and that they continue to produce from fifty to seventy-five bushels to the acre is conclusive evidence of their great fertility and durability."

The bottom lands of Ohio are, probably, in some respects different from the prairie soils of Illinois. From the light and friable nature of the prairie soils, they offer so little resistance to the plow and other

implements used in their cultivation, that some of the large corn-growers of Middle Illinois "estimate the expense from the time of starting the plow, till the corn is cribbed or harvested, at only from four to six cents per bushel." So said the Editor of the *Prairie Farmer* some two years ago. To raise corn thus cheaply, the soil and climate must be peculiarly adapted to its growth and maturity; and as little, or no manure is used upon the prairie corn-fields, it is evident the soil must *naturally* contain all those elementary constituents, in an available form, required for a healthy and vigorous growth of the plant.

Analysis "a thousand times repeated," have proved beyond all question, that the ash of our cultivated plants contain in appreciable quantities some ten or eleven earthy ingredients. That these earthy salts; composing the ash, can only be obtained from the soil in which the plants grew, is a self-evident fact; for it has been satisfactorily ascertained, that a soil absolutely destitute of some two or three of these important inorganic bodies is incapable of growing corn, grain, &c., in perfection. A soil wanting these cannot yield seed capable of reproducing its kind.

In accordance with the above expressed views, Professor Johnson says, "a soil to be fertile, must contain all the substances which the plant we desire to grow can only obtain from the soil, and in such an abundance as readily to supply all its wants; while at the same time, it must contain nothing hurtful to vegetable life."

That the Ohio and prairie soils spoken of in this paper are vastly more productive than most of our New England soils, is a universally conceded fact; and the cause of this exuberant fertility has generally been supposed to be mainly due to their containing a much larger percentage of *lime*, potash, soda, &c., than the soils of the North. But carefully conducted analyses of the soil of the Scioto valley do not seem to justify such an assumption. In 1851, Mr. David A. Wells, of Cambridge, Mass., a competent chemist and analyst, was employed by the Board of Agriculture of Ohio, in "examining, analyzing, and reporting on the nature and composition of the soils of that State." In the July No., 1852, of Silliman's *Journal of Science and Arts*, Mr. Wells has furnished a paper on the "Soil of the Scioto Valley, Ohio," in which he says, "Dr. Dana, of Lowell, in the course of many years experience, has collected and preserved the results of more than four hundred analyses of soils, from the northern portion of this country. The analyses of the soils I have made from Ohio, and the analyses of all the soils resulting from the drift agency, do not differ *materially*, so far as regards their inorganic constituents. That is to say, the soils of the Ohio, yielding with little or no culture from seventy to eighty bushels of corn to the acre, are *no better*, so far as their mineral composition is concerned, than many of the Massachusetts soils which have a reputation for sterility. Slight differences it is true, exist, but not to such an extent as might be supposed from contrasting the relative products of the different soils. In what then is there a reason for their difference in value to be found? It cannot be in the attributes in which they agree—which are their mineral constituents, but in the attributes in which they differ; and these are the amount and condition of the organic matter contained in the soils, and the *fineness of their elementary particles*."

"The first and perhaps most interesting fact noticed in the examination of these soils was the remarkable degree of fineness of their constituent particles. In this respect I venture to assert that they are not surpassed by any other alluvial deposits upon

the surface of the earth, some of the soils being little else than *impalpable powders*."

From the remarks of Mr. Wells, in connection with many other well known facts, we are of the opinion that the fertility of a soil depends more upon the fineness and commingled state in which its elementary particles exist, than has generally been supposed, and we propose in a future number to refer to some of the facts having a direct bearing upon the subject.

L. B.

[*Journal of Agriculture.*]

Ice Houses.

MESSRS. EDITORS:—I want to construct immediately a small ice fixture in my cellar for family use. My cellar is 44 by 40 feet, and 8 feet high; the wall is split granite, with a plank floor; it is pretty dry. I would prefer placing it in the north corner. Here is my plan:

I would first line off upon the cellar corner floor 8½ feet square; within this space stud up a room 6 feet 2 inches, with 4 inch joist, and board up upon the inside. This room is then 6 feet square and 8 high, which is to receive the ice; pitch this room all around upon the outside to keep moisture from getting in or out, then board up upon the studs, which leaves a 4 inch space all round between the studs; then stud up again on two sides, and plank up, the other two being formed by the stone wall, 15 inches from the inner studding. This 16 inches of space all round to be filled with dry saw-dust, (perhaps wet saw-dust would do as well.

For convenient ingress to this fixture, I propose to fit in, near the bottom, a box or case about 7 feet long, 1 foot deep, and 2 wide, to extend from the outside through the ice room; the ice is to be lowered in from the top and packed in and around this pitched case, which has double doors lined with cloth; in this case is to be a provision chest to move in and out easily upon rollers; this chest is to be in separate apartments, for the reception of fruit, butter, meats, &c. But instead of this horizontal case and chest, I could insert them in a vertical position under the hatchway at less expense, although it would be more inconvenient in getting the chest in and out; then again I should not have so compact a body of ice.

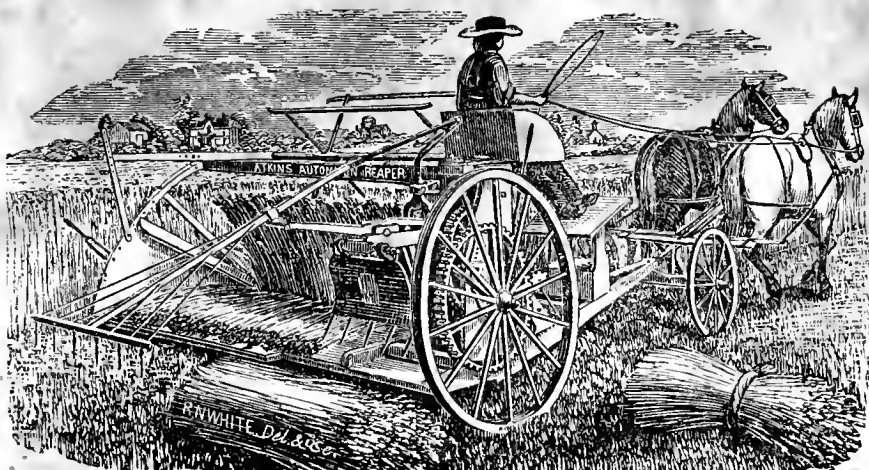
What do you think of it? Will it answer? Is the horizontal or the vertical way best? Am I right in leaving 4 inches air space? Should the saw-dust be wet or dry? Will moving the provision chest in and out once or twice a day melt away the ice too fast?

C. J. F.

North Lincoln, Me., 1853.

This plan of an ice house we consider an excellent one; the saw-dust should be *dry*. The air space is a good idea, and we would prefer the horizontal drawer. There should be some allowance below for drainage.—[*Scientific American.*]

TO PREVENT PUTRID FERMENTATION OF URINE.—A foreign chemical journal states that by mixing muriatic acid with urine, it can be kept a long time without acquiring a bad order. It is said:—In the month of September, 1851, a quantity of urine was mixed with muriatic acid, and exposed to the influence of the air and rain for nearly a year. The urine during that period, did not change its condition, and in the year 1852, during a very dry period, it entirely dried up, and formed an odorless salt.



Atkins' Automaton, or Self-Raking Reaper and Mower.

The above engraving we have procured with a view of giving our readers some idea of this celebrated reaper, having the peculiarity above all others, of an ingenious attachment, which, without adding much to the labor of the team, takes up the wheat on the platform, as fast as it accumulates enough for a bundle, and deposits it ready for binding, on one side of the swath, more perfectly than it can be done by hand.

J. J. Thomas, who witnessed its trial at Geneva, N. Y., says of it—"At the same time, the self-raker presented by J. S. Wright, of Chicago, was tried—it was truly an extraordinary curiosity, and excited the highest interest. The self-raking machine (attached to Hussey's Reaper,) is the invention of J. Atkins, of Chicago, a person of great ingenuity, as this contrivance fully testifies. The rake sweeps the bed where the fallen grain is deposited, presses it against a toothed plate, and both, holding firmly the bundle of grain thus collected, swing round the quarter of a circle off behind, when they open wide, and drop their contents in a neat bunch upon the ground. All these motions are accomplished by a very simple piece of mechanism, and they seem so nearly the immediate result of intelligence, that this machine was generally called by the name of the "Automaton Reaper."

Its invention is quite recent, and it had scarcely ever been used before, and hence owing to an accident it did not succeed the first day of its trial. It was, however, repaired, a temporary reel attached, and tried again on the 23d with entire satisfaction, proving decidedly the best self-raker on the ground.

The origin of this invention is quite interesting, and is related as follows:

The inventor is Mr. Jearum Atkins, late of Will county, Illinois, now residing at Chicago. He is a millwright by trade, and as this invention testifies, an original and remarkable mechanical genius. A.

bout ten years ago he had the misfortune to be injured by a fall, and he has since been almost wholly confined to his bed, being unable even to sit up more than two or three minutes at a time.

Two or three years ago, a reaper was brought into this neighborhood, and an opportunity given him to examine it from his bed for a few minutes. A farmer present, knowing his inventive skill, remarked to him, that if he "would only attach a raker to it, he would make his fortune." Being a son of poverty as well as affliction, compelled to rely wholly upon his friends for support, they themselves being also poor, yet possessed of a manly, independent spirit, the remark awakened his thought and determination. Various plans were successively formed and abandoned without trial, farther than a small model, till last Winter he struck upon a wholly new arrangement. Having mentally studied out the details, he ascertained by mathematical calculation, before making any part of his model, the size, movement, and effect of each separate piece, and then made one part after another of his model, according to his figures, put the separate pieces together, and the whole movement was effected exactly as calculated, even to a little rise in the rake as it is drawn across the platform. The model has not been altered, and the full sized machine is almost precisely the model enlarged.

Considering the novel and complicated motions, yet perfect simplicity and small number of pieces by which they are produced, it shows a very high order of mechanical talent to have at once perfected such a machine, and in such a manner. Most inventors, it is believed, get some parts to work right in a model, and then plan and add another and another, but the whole plan of this Self-Raker was entirely formed in the inventor's mind before a single piece of wood or metal for his model was touched.

Seldom is it that an invention, involving any thing like the novelty and complicated movement of this, is at once and so successfully introduced into practical

use, even when the inventor has the benefit of much experience in the branch of industry for which he is laboring; yet so thoroughly had Mr. Atkins studied out all the difficulties to be obviated, that though he had never seen a reaper but once, and then not at work,—notwithstanding he knew nothing of grain cutting, having from boyhood been closely devoted to his trade till he became bed-ridden; still, so correct were his views, that where the mechanics deviated from his plans in constructing the machine for trial, it failed, and his wishes had to be followed out in every particular.

Eight first premiums were awarded to Atkins' Reaper in 1852. It is warranted to be a good Self-Raking Reaper, though not warranted as a Mower, yet every experiment in grass has been successful.

Price in Chicago, \$160, cash.



Ketchum's Mowing Machine.

Among the many different mowing machines which have been tested the past Summer, in this section of the Union, we have heard of none giving such general satisfaction as Ketchum's. We have no interest in one more than an other, and only wish to keep our readers advised of the claims and recommendations of each, to enable them to judge for themselves which is the *best*. As we anticipate a largely increased demand by another year, it is important that the peculiarities of each should be well understood, as well as the result of any trial exhibitions.

We hope to be able to furnish a cut and description of each now patented, in the Pennsylvania Farm Journal, before another season. Howard & Co., the manufacturers at Buffalo, of Ketchum's state that they have sold more than 1000 the present season, under the following warrantee:

"That said machines are capable of cutting and spreading with one span of horses and driver, from ten to fifteen acres per day, of *any kind of grass, heavy or light, wet or dry, lodged or standing*; and do it as well as is done with a scythe by the best mowers."

The recent improvements are:

First, Every Shaft has bearings at both ends, which entirely overcomes all *cramping, and cutting away of boxing*.

Second, The simplicity and strength of the entire gear, as well as the great convenience and ease in getting at each and every nut about the machine; al-

so the very convenient arrangement by which every piece and part of the machine may be got at or taken apart.

Third, A counter balance attached to the crank shaft which gives the crank a steady and uniform motion, as well as causes the machine to run much easier than any before built.

Fourth, Every machine will be made to throw out of gear.

Fifth, The convenience of oiling, every bearing having an oil cup sufficient to hold oil for a long time, by stuffing the same with cotton.

"INSTRUCTIONS FOR USE.—Put the knife bar to its place, and be sure all the nuts are tight; oil the machine well, except the knives; the brass boxes should be stric'ly looked to, and not confined so much as to cause friction—also, particular care should be observed to keep them well oiled; guage the machine by the neck yoke strop, the front of knife bar wanting to be a little higher than on a level; in very heavy or lodged grass, attach the track clearer at the outer end of the rack bar; in starting, always give the knives a motion before coming into the grass; the driver should always be on his seat, and drive with a steady brisk walk, and in *no case turn to the left*; to sharpen the knives, disconnect the pitman and draw them out through the main wheel; in grinding them, be careful and keep the same bevel; the usual quantity to cut without sharpening, is from five to ten acres.

If the above directions are followed, we warrant the machine to work as recommended.

HOWARD & CO."

Price \$110, cash, with extra cutter, delivered on board cars at Buffalo.

Ketchum's mower took the first premium at the mowing exhibition at Mount Holly, New Jersey, and Montgomery county, Pa., for the best mower, also at the trial in Springfield, Ohio, and received a gold medal at the American Institute in New York, and perhaps others of which we are not advised.

Mamre for Autumn Roses.

Mr. Rives, a famous Rose Culturist, applies a mixture of wood-ashes and guano in the proportion of half a peck of guano to a bushel of ashes to his late roses, with most excellent effect. About two quarts of the mixture is applied to each shrub or tree, in a circle eighteen inches in diameter around the stem, where it is suffered to remain undisturbed until Autumn. It should be applied early in June and covered with a thin grass mulch, and the effect will be that it will retain the dew and shower, and keep the tree in constant and vigorous growth, which very necessary to the production of a good crop of flowers in the Fall.

Potato Rot.

The Providence (R. I.) Journal says that the potato rot has made its appearance in Washington county.

Substitute for Guano.

A reward of £1000 sterling was offered some time since, by the Royal Agricultural Society of England, for a merchantable article which shall possess the fertilizing properties of Peruvian Guano, provided, that 'it be sold at the rate of £5 per ton. Edwin Pettit, of London, claims, as we observe by recent arrivals, to have discovered the desideratum, which he calls 'Fish Guano.' He, however, declines to apply for the premium, and says: "Would it be a prize to me to receive £1000, on condition that I sell an article at £5, when its ascertained market value is £9 per ton? Give me a fleet of fishing boats, and I will make as much Guano in twenty-four hours, as the Myriads of Peruvian birds will make in a year, of as good a quality, and much lower price." The consumption of Guano in Great Britain ranges from 190,000 to 200,000 tons per annum, which will give an idea of the importance of the subject to the agricultural interests there.

New sources of supply are being sought for, and it is announced that a new discovery on the East Coast of Africa has just been made, which it is said will afford a "twenty years supply." Guanoes have also recently been discovered in the Indian ocean, but on analysis do not prove equal to the Peruvian, and therefore will not come into direct competition, resembling more those of Patagonia or Saldanha Bay.

Professor Way's analysis of the different Guanoes, resulted as follows:

	Ammonia. per cent.	Phosphate of Lime. per cent.
Peruvian,	17.41	24.12
Ichaboe,	7.30	30.03
Patagonia,	2.34	44.06
Saldanha Bay,	1.62	56.04

Four specimens from the Indian ocean, also analyzed by him gave of ammonia, per cent.

No. 1—1.19 No. 2—1.11 No. 3—3.82 No. 4—1.87

The Patagonian Guanoes, although deficient in ammonia, contains a large per centage of Phosphate of Lime, which makes them valuable in England for their great crop, that of the Turnip. The Guano from the Indian ocean, will be valued for the same reason, and as the Editor of the Chronicle remarks, "will probably cheapen Phosphate of Lime more than ammonia."

He says, also, "active measures are being taken to secure this produce of the newly discovered Islands, for the use of the British farmer." This might be imagined very readily, and we imagine also the discovery will be made as quickly by the English authorities, that these new deposits are so many leagues distant from the coast of any other government, as to give them the first discoverers, undisputed jurisdiction, and exclude all other nations.

Horse Trade in New York.

There is probably stable room enough for fifteen hundred horses on four blocks, between Second and Lexington Avenues and Twenty-third and Twenty-fifth streets. The old Bull's Head stables have been enlarged until they cover a space from Twenty-fourth to Twenty-fifth streets, 66 by 200 feet, with an addition 22 by 100 feet, with room for 200 horses and are often full. We have never found less than 125 in the stables at any one of our visits. The building is one-story, with lofts for hay and grain, and while open during the day is well ventilated, but not sufficiently so at night, and this is the case with all in the street, and though kept clean as possible, no absorbent of ammonia is used, and hence, as we think, comes the troublesome ophthalmic disease, called the "pink eye," so prevalent at times in this street, among horses fresh from the country. A free use of plaster would add much to the health of horses, if it did not entirely prevent that disease.

The stables owned by Northup & Post, nearly opposite the above, are five in number, forming a handsome two-story brick edifice, 80 by 130 feet, with room below and above for 230 horses. We are told that the rent of these stables is worth \$2,000 a year. Mr. Northup is one of the oldest dealers in the street. He tells us he was there eighteen years ago, when there were very few buildings about the neighborhood, and that he continued to visit the street occasionally several years afterward, with a few horses, and thinks that perhaps one might have been sold then to one hundred now, and that prices did not average half what they have this year. The quality of horses, too, was quite inferior to the present stock.

Although these two are the largest separate stables in the street, Macaulay can put up more horses than either. His several stables occupy nine lots, 25 by 100, and hold 300 horses. The average number on hand is about 170. There are 15 other stables in the street, which hold from 5 to 75 each. We found on one occasion 998 horses for sale, besides private and livery horses, in this short portion of one street.

Averaging the sales at \$150 per week, at \$150 each, which is below the mark estimated by those in the trade, and the amount will be \$67,500 per week, or \$3,510,000 per annum—a little item in the commercial transactions of this city, not entirely unworthy of notice.

We hope there are some of the croakers still living, to read our remarks, who predicted the ruin of farmers and destruction of their trade in cattle and horses, when the far-off "outside barbarians" began to send in their stock from the Holland Purchase and Western Reserve to glut the market. Perhaps they have heard also of Ohio, Kentucky, Indiana, Illinois, Missouri, and Arkansas, and their boundless pastures; perhaps they have not heard that notwithstanding one constant stream of cattle and horses pouring in from that great region of rich soil and cheap land, the market is not yet glutted, and prices never rated so high before, as they have the present season. [N. Y. Tribune.

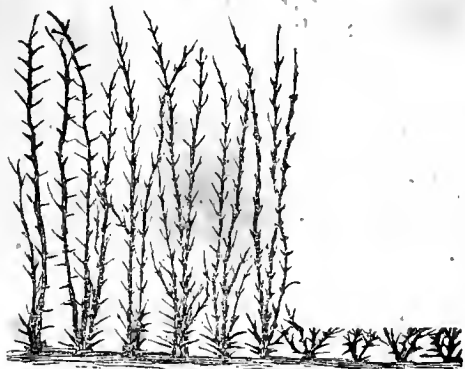
Soap Suds for Watering Plants.

Nothing can be better for Summer watering of plants and vines, than the suds of the weekly wash, and no one who desires a good garden will suffer it to be wasted. For cabbages, cucumbers, beets, and the like, it seems especially adapted, and one of the most thrifty grape vines we ever saw, was watered with soap suds almost daily in dry weather. A large supply is not needed at once, but frequent waterings promote rapid and vigorous vegetation.

Osage Orange Hedging.

In Illinois, from the scarcity of timber, Hedging is a matter of absolute necessity, and experience there for several years as well as in Ohio, seems to have settled down in favor of the Osage Orange, as having all the indispensable requisites for a hedge plant, viz: sufficient hardiness, great durability and vitality, vigor of growth, capacity to bear cutting severely, with a tendency when headed down, to pour forth numerous small branches, with myriads of sharp elastic, and durable thorns; the whole to remain green, though densely crowded. It is estimated more than twenty-five millions of plants were set out in Illinois, in 1852, and the demand not supplied. It is also being very extensively planted in Ohio. In our State, particularly in the Eastern parts of it, fencing, including the first cost, labor of putting up, and after a short time, continued attention to repairing, and then again renewal, forms a heavy item in the annual expenses of the farm. The Virginia Thorn, *Crataegus Cordata*, and the Honey Locust, *Gleditsia Triacanthos*, have both been tried in our county, but are too slow in growing to give satisfaction, and the former especially, too liable to be broken into gaps. The leaves are also attacked by an insect, and in many places the hedge has entirely died out, after having grown to considerable size. We are inclined to believe the Osage Orange supplies a desideratum long wanted here and which has been now fully tested as regards hardiness and rapidity of growth.

We think it worthy the attention of the Pennsylvania farmer, and introduce below an article, which we believe first appeared in the Western Horticultural Review, giving the method of management, in planting, trimming, &c., in the West. The cut shows the appearance of the hedge one year after planting, with from two to six shoots, and which must be cut down as described.



"DIRECTIONS FOR PLANTING.—To prepare the ground where the future hedge is to be formed. For this purpose a strip must be marked out ten feet in width along the whole line where the hedge is to grow.

This must be ploughed, throwing the earth out

from the middle, then back-furrowing also from the centre. The ground to be carefully smoothed with a harrow, that it may be freed from stones, lumps and rubbish, before the planting begins.

Having staked the line through, take a small cord, some six or eight rods in length, mark it off every ten inches, and stretch it where you want the hedge. Now run down a socket by each mark on this line, then set the socket eight inches from the line opposite the centre of each space, making two rows of holes alternating thus:

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into which insert the plants a little deeper than when they came down of the ground, pressing the earth well to the bottom of the hole around the roots.

That the soil may adhere well to the roots, it will be found advantageous to have the sprouts dipped in thin mortar before planting.

Having the plants cut down to within three inches of the ground they may grow the first year without further trimming.

If in a healthy condition, the second season they will require three trimmings as follows:—In the Spring cut them down to within three inches of the first cutting; when they again grew out, say two feet, trim within five inches of the last cutting, and throw the soil up with a plough, leaving the second crop of shoots some six inches above the ground; repeat the cutting when these last shoots have attained a length of two feet. During the third Summer the plants should undergo the same inexorable pruning, and the fourth year will complete a fence that shall be a perfect barrier against man or beast.

The process of cutting off half the top at first, and annually shortening back so much of the thrifty growth of a young hedge, seems to the novice, like unnecessary cruelty to the plant, and a trial of one's own patience. But it is the "inexorable must," in hedge growing. Raising a hedge is like raising a good name; if there is no base or foundation for the structure, it is very likely to betray dreadful gaps at the bottom before it is well established.

In a hedge the great and all important point is to make a broad and thick base. Once this is accomplished, the task is more than half over. The top will grow into any shape desired. But neeremancy, short of cutting the whole down again, will fill up the base of a hedge that is lean and open at the bottom. Hence the imperative necessity of cutting down the shoots till the base becomes a perfect thicket."

A hedge planted according to the foregoing directions will require 40 plants to the rod, or 12,800 to the mile.

The intelligent farmer need hardly be reminded that, however explicit directions may be given, much must be left in this case, as in all others, to the ex-

ercise of a discriminating judgment. If the hedge grows slow and thin, it should not be cut so frequently, nor so closely, as if it were in a very thrifty and luxuriant condition.

Do not trim the plants too late in the season, thereby exposing the tender shoots to the frost before they are matured—and those who rear the plants from the seed will find some care necessary to shield the young plants in the beds from the rigor of the Winter in this latitude.

While the hedge is small, it may be trimmed with a scythe. When it shall have attained a larger growth, a corn knife, such as is used in cutting corn in the field for fodder, will be found the cheapest and most convenient instrument for pruning, and with which a man may trim from 200 to 400 rods of hedge per day.

The socket used in setting the plants, is a cast-iron ferrule, 14 inches long, 3 inches in diameter at the larger end, into which is inserted a wooden handle 2 feet in length, with a bracket upon which the foot is placed.

Care should be taken that the plants are healthy and vigorous when put into the hedge row, as replants seldom do as well as the first settings.

It is very essential that the soil should be cultivated 4 feet on each side of the hedge, and kept free from weeds, as well as from being trampled, during the first season, by stock. If the earth upon which the hedge is planted is poor and thin, it should be properly manured. In a word, it should be constantly borne in mind by the hedge grower, that the work upon which he is engaged is not for a day or for a year, but for all time, and that it is only by care and attention that any useful undertaking can be successfully prosecuted.

Soiling Cattle.—New Rochelle Blackberry, &c.

Copied from proceedings of New York Farmer's Club.

The following letter from Frederick Prime, relative to the origin of the large Blackberry of New Rochelle was read:

To the President of the Farmer's Club.

SIR:—In a late number of the Westchester News, published in this town, I have found an interesting paper, read before your Society by Mr. Lawton, in relation to a remarkable blackberry, which for some years has been known in this neighborhood.

As the article gives only a general account of the origin of this plant, I have supposed a more particular statement might be of interest to the Farmer's Club.

About the year 1834 Lewis A. Seacor, a carpenter, then and now, residing in the village of New Rochelle, in walking over a field, between my residence and the Sound, discovered a blackberry of a remarkable size, and having obtained permission to remove some plants for cultivation, placed them in his garden—about eighteen.

After careful inquiry in this neighborhood, I am satisfied that it is to Mr. Seacor we owe the preservation of this remarkable and valuable fruit, and that

all the plants now known had their origin from his.

A relative of a former proprietor brought with him from England, many years since, some shrubbery, whence it has been supposed the blackberry in question was introduced. This is a mere conjecture, the probability of which could be easily ascertained by comparing this with the English varieties. The generally received opinion in this neighborhood is that it is a seedling of native origin.

I am informed by Mr. Seacor that he has called it the "*mammoth blackberry*," and has sold it under that name.

Should any new name be given, it appears to me that of the "*Seacor mammoth blackberry*," or the "*New Rochelle Seacor blackberry*," would be but an act of justice to the person who has preserved the fruit, and might prove of advantage to him, as he continues to raise them for sale. He is a working mechanic, and the few dollars he receives from the sale of his plants are of importance to the comfort of his family.

The plants were removed by Mr. Seacor before I purchased the property, and I regret that from my ignorance of their existence the parent stocks were destroyed in clearing the lot where they grew.

Yours truly, &c.,

FREDERICK PRIME,

New Rochelle, Westchester co., New York,

August 7th, 1853.

Mr. Lawton is unable to say whether Mr. Seacor is the first discoverer or not.

Mr. Mapes moved that Mr. Prime's letter be placed on file. Carried.

EXTRACTS BY H. MEIGS.

Flowering of Plants.—Berghaus says that in the middle latitudes of Europe and North America the flowering takes place generally—four days later for each degree of latitude towards the north.

How was the earth originally clothed with plants? Various hypothesis have been advanced. Linnæus supposed that at first there was only one primitive centre of vegetation, from which plants are distributed over the globe. Some, to save all trouble, suppose that plants were produced at first in the localities where they are now seen growing. Others think that each species of plant originated in, and was diffused from, a single primitive centre, and that there were numerous such centres situated in different parts of the world—each centre being the seat of a particular number of species.

Dauberry says that analogy favors the supposition that each species of plant was originally formed in some particular locality, from whence it spread itself over a certain area gradually—like the origin of man from Adam and Eve—that the spread of vegetation still goes on as it began, from place to place, island to island, &c. The remarkable limitation of certain species to single spots on the globe seems to favor the hypothesis of specific centres. Professor Forbes says that many plants peculiar to the Flora of the west of Ireland have the nearest portion of their specific centres in the north-west of Spain. Others of the south-west promontory of England are found in the channel islands, and in the opposite coast of France. The vegetation of the south-west of England is that of the opposite continent.

Watson and Forbes conclude that as England does not contain more than one vegetable—that is the *Eriocaulon Septangulare*—that is not found on the coast of Europe—England cannot be deemed a centre of vegetation.

The Chairman called up the question of the day: viz: Soiling of Cattle, and the best plans for it.

Thomas Bell, of Morrisania, who has had very long and extensive experience in this business, was invited to give his opinion: and he said he had been engaged in agricultural pursuits, especially with cattle, for thirty-five years. I was soiling cattle in Scotland when I left it. I was, supplying my cattle in that way the year round with grass, roots, &c. Much depends upon the character of the land we have to deal with. On rocky, uneven, mountainous grounds, we are compelled to graze cattle.

I have soiled from one hundred to one hundred and fifty head on four hundred acres, at Fordham, near this city. I set aside ten acres of the best land, ploughed it not less than eight inches deep. Others may go deeper than that, and I shall approve it. I sowed Indian corn on it broadcast. I had manured it with twenty-five cart loads an acre of my barn-yard manure in April, and when spread it covered the whole surface. I ploughed it all in. That field had produced a crop of potatoes the year before. I took yellow northern corn and sowed four bushels of it broadcast. On one acre, on the 1st of May, I sowed it, in going three times over the field, up and down. I then ploughed the field with my one-horse plough, which I call my *corn plough*, about *four inches deep*. I then run a light roller over the field.

On the 10th of May I sowed one acre more in the same way. On the 20th of May another acre in the same style. On the 30th of May another—that made *four sowings* of corn in May.

On the 10th of June one acre more in the same way, and an acre each in the same style on the 20th and 30th of June.

On the 10th, 20th and 30th of July each an acre in the same way.

On the 15th of July I commenced with the first of May acre, on which the corn averaged about four feet high, and in silk. I cut daily all that was wanted by my cattle, (one hundred of them,) and it lasted till the 15th of August. I gave meal along with the corn stalks. The soiling yard was about an acre in size. The cattle had free access to pure wholesome water just as much as they pleased. They went in and out of the adjoining stables, and that exercise seemed to be as much as they wanted, for they were perfectly healthy.

From the 15th of August to the 25th the corn cut was of a stronger growth than the first. My hundred head were kept three months in this way. I saved much in the article of manure. If I had made tanks to save all the urine of my cattle I should have made more profit. This way of soiling renders interior fences unnecessary on a farm, and it is a large expense saved. On our farms in England we sprinkle the manure over the growing crop with a tin sprinkler, like those with which we here water the streets. That would not answer in a dry time—it would prove too strong for the crop. I can get as much milk by pasturing as by soiling. The corn feed made the richest milk, and some say the richest butter.

I sent daily to market from one thousand quarts to twelve hundred quarts of milk. Sometimes my number of cows was one hundred and fifty. The old Shakeress cow is still alive; she is about eighteen years. You have heard me say how I came by her. I repeat it. One day I met with a Shaking Quaker from Lebanon, who said to me: "Friend Bell, do'st thee want a good cow?" I said, "yes." "Well," says the Shaker, "I have a good one for thee, if thou wilt give me sixty dollars for her." "That's a high price," said I. "Well," replied the Shaker, "she

will give thee a bushel of milk a day," (thirty-two quarts.) I gave sixty dollars and took the Shakeress, who sometimes gave me thirty-two quarts a day, and the average for a whole year fifteen quarts a day. She paid me well. I had another, which some of the members present saw on my farm—one I called the Old Judge. She was American with a cross of the Devon. She never gave me more than thirty quarts a day, but she gave it longer. My experience has been profitable.

Professor Mapes. Our valued friend Mr. Bell has occupied nearly all the ground. I give—as I am requested to do so—my experience in soiling. I have confined my cows in a clean stable—fastened to a pole and cut their feed for them. I was told they would suffer for want of exercise. I have not found that to be true. It is true that their flesh and yield of milk are both diminished by much exercise. Cattle are less exposed to accidents than when pastured; so are they protected from storms, the calves are better taken care of, their manure—especially the fluid portion, is all saved—it should be mixed with muck and other solid manures, while yet warm, when it has not lost by chemical change—far better than pumping it out of the cistern after a week. We add to the manure all the wash of the house. When the manure is not sufficiently wet we pump water upon it. When the urine is put on warm from the cattle it decomposes ten times as much muck as it does when cold. Great labor is saved in soiling. I have found much advantage in using liquid manure. On one occasion I saved a pea crop by it—it is well to throw in a little diluted sulphuric acid. My manure is in little danger of fire fanging. My cattle are more protected from flies in the stall. They are kept cooler in summer than in winter. The cows give more milk, and they keep better health than cows in pasture. In the pasture they get but one sort of food—in soiling a variety, which, if judiciously served to them, is more agreeable and useful. When they are scouring from too much green food I give them carrots, the peptic acid of which invariably cures them, and gives them aid in digestion. I give, among other roots, the Vienna Cauli-Rapa, (cabbage turnip,) which is very superior. Vilmorin has introduced a hybrid of the turnip and the cauliflower. For green food, in the season for it, our Indian corn is excellent, as shown by Mr. Bell. I prefer Stowell's evergreen corn to any other for that purpose. It grows larger; the stalk is almost as sweet as sugar cane, the joints (which in other Indian corn are hard) are in this corn quite tender, a man can eat it, and it gives a double quantity on an acre. The juice of it has been tried, and is up to eleven degrees Beaumais—equal to the juice of Santa Cruz cane.

Soiling saves interior fencing, and it is a great saving when not only the cost of the fewer repairs are saved, but of the ground on both sides of the fences which cannot be cultivated for some distance from the fences. The stables, in soiling, must be kept clean and well ventilated, of course—or the cattle must be turned out for exercise in time. I have no occasion to turn them out. I have mentioned the carrot; it has a value far beyond that of a mere food, it contains peptic acid of excellent use in digestion. It is now used in making jellies: it is a *cow doctor*; and always cures. One bushel of oats, and another of carrots, are fully equal in value to two bushels of oats. The excreta of the cattle fed with carrots do not contain that undigested oats, corn or hay or what else; they almost resemble those of a healthy man. I have found the strap-leaved red top turnips good in soiling—it can be profitably raised, planted at any

time, stand out the winter—get pithy before spring. Rutabagas stand out in winter, do much good to the soil as a mulch. In spring I pass a roller over them all to crush them, and then plough them in—little additional expense. Mr. Campbell cooks the feed and gains by it. I cut my Stowell ever green corn stalks—put them in a vessel with a little salt, pour hot water on them, cover them up with a cloth, and when cool they make a very acceptable food.

Judge Van Wyck.—On small farms, near large cities, it may be cheapest, even in our country, to soil our cattle. Such farms rarely have much stock on them; they want their land generally, or most of it, for garden vegetables, fruit, poultry, &c.—to raise feed for the last, as well as their other animals. On large farms of from 200 to 400 or 500 acres, situated in the interior, some distance from the market, it appears to me it would be more profitable and convenient for farmers to graze their stock, as well that which they require for the dairy, as for fattening and working. As far as my experience and information goes, the cost of labor in such a system would not be more than one-fourth or one-fifth of what it would be in soiling. The raising of crops in succession on distant lots of a large farm, whether the corn plant, or any other, and carrying and distributing it for feeding would cost us three times as much, and probably more, than letting the animals run at large, choosing their own feed, drink running water, and have exercise and pure air. This, it appears, to me, would be, more for the profit of the owner as well as the health and thrift of his animals. Grazing farms as well as any others must be well managed to do well; this as regards tillage of every kind, ploughing, hoeing, clearing, manuring, and the use of the best grasses, with frequent and judicious changes of feeding grounds. Why soiling is so much more practised in Europe than here, is the dense population there, and the scarcity of land; they want the latter to raise food on for the former. Notwithstanding this, we have it, from the best authorities, that in Holland, possessing a small territory but a very dense population, they graze their cattle, and especially their cows, from April to November. Their dairy system is generally allowed to be the best in Europe, and this in quantity and quality of product, her butter and cheese will command in any European market, and at all times from ten to twenty per cent. more than any other. Mr. Bell admits, that on rough hilly farms, even near the city, it would be better to graze cows as well as other stock, than to soil them, whether the farms be large or small. Of course, on large, hilly, uneven farms, located any distance in the interior, the inducements for grazing must be much stronger. Mr. Bell gave Long Island and some parts of New Jersey as proper specimens of surface for soiling. No doubt localities in both these sections, and especially the former, might be made much more productive than they are by the grazing system. It is not only the adoption of the system, but it must be properly preserved to succeed. Good tillage, high manuring, proper keeping of the stock as regards yards, feeding, water, cleanliness, taking care of the manure,—this last constitutes a considerable portion of the gain. Mr. Bell admitted, that his farm being large, he grazed his cows a part of the season; he spoke highly, though, of the advantages of soiling in certain localities.

Mr. Judd of the Agriultur.—According to the experience of a man in Holland, it seems that soiling was not so profitable as is here stated. Stephen's book on the farm says it is about as to land as two to

one, but by Mr. Bell's experience it is making ten acres answer for fifty acres of grazing.

Mr. Bell.—If you mean to say that the soiling was with clover, you are right,—but not with corn as I use it.

Mr. Judd.—It is said that twelve cows require one man.

Mr. Bell.—I found one fit man could take care of twenty-five cows.

Mr. Judd.—Men are expensive. One hundred dollars paid to a man, will go further in hiring pasture than in soiling. The making of manure depends much on a man's location; most farmers have no muck at all, and little litter.

Prof. Mapes.—Where there is no muck there is soil, and let that take the place of muck and absorb all the extra fluid of the cattle.

Mr. Judd.—The strongest point for pasture is the cheapness of rent in most places.

Prof. Mapes.—I pay near my farm—for pasture thirty dollars an acre of land worth five hundred dollars. It is but the interest of the value of the land.

Judge Van Wyck.—Knows land four miles from New York which lets for two and a-half to five dollars an acre per month.

Mr. Bell.—My interest paid on 400 acres was two dollars an acre per annum. The owner of the land did pretty well by it, and I did better still. Cattle travel far in the pasture and lessen both their flesh and their milk. On pasture, the difference of feed is considerable. I found it amounted to one hundred and fifty quarts less on some portions of the pasture than others, in a day.

Mr. Lawton presented to the club for refreshment, a basket of his great blackberries, enough for all.

Mr. Judd proposed as a next subject—"The top dressing of crops." Seconded by Prof. Mapes, and carried.

The Club then adjourned to the first Tuesday in September, at noon.

H. MEIGS, Secretary.

[*American Artizan.*]

Cutting Timber.

If oak, hickory or chesnut timber is felled in the Eighth month, (August,) in the second running of the sap, and barked, quite a large tree will season perfectly, and even the twigs will remain sound for years; whereas, that cut in Winter, and remaining until next Fall, (as thick as your wrist,) will be completely sap-rotten and will be almost unfit for any purpose. The body of the oak split into rails will not last more than ten or twelve years. Chesnut will last longer, but no comparison to that cut in the Eighth month. Hickory cut in the Eighth month is not subject to be worm eaten, and will last a long time for fencing.

When I commenced farming in 1802, it was the practice to cut timber for post fencing in the Winter. White-oak posts and black-oak rails, cut at that time, I found would not last more than ten or twelve years. In 1808, I commenced cutting fence timber in the Eighth month. Many of the oak rails cut that year are yet sound; as well as most of those formed of chesnut. If the bark is not taken off this month, however, it will peel off itself the second or third year, and leave the sap perfectly sound. The tops of the trees are also more valuable for fuel, than when cut in Winter or Spring.

I advise young farmers to try the experiment for themselves; and if post fences will not last twice as long, I forfeit all my experience as worthless.—[New Jersey Herald.]

For the Farm Journal.

The Potatoe Plant.

J. LACY DARLINGTON,

Dear Sir:—We promised your readers of the September No. the best mode of preventing the potatoe disease, as well as the practical views and experiments, of Dr. Klotzsch in relation to quantity and quality. Our German authors believe, that the new potatoe is formed along the course of new stalks or runners, so that each new tuber becomes as it were a centre for the spreading of roots, and any agent or agents that suppress the spreading of roots and the formation of new potatoes, will also impede the growth of the stalk; and in return whatever primarily affects the stalks, will have secondarily bad effects, on the growth of the potatoe.

In raising potatoes, we should therefore have three great objects in view:

- 1st. Encouragement of stalks and leaves.
- 2d. Adaptation of soil and depth of planting.
- 3d. Locality.

In carrying out our first object, Dr. Klotzsch made experiments as early as 1846, on single potatoe plants. He pinched off the ends of the branches or stalks half an inch the 6th or 7th week after planting, or when the stalks reached the height of from six to nine inches above the soil. Great stress is laid on not taking off *more than is above specified* peradventure it might stunt the growth of the plant. This treatment is repeated on the branches, after they have attained the same length; by these manifestations, simple as they are, easy as they are performed, it was ascertained that the stalks were more numerous, containing many more leaves, and could well be distinguished from all the others, which were left to mother nature. The produce from these plants were abundant, and the potatoes perfectly healthy, while the plant next them which had not been so treated, gave uniformly less produce, and in many instances attacked with the disease. In order to verify and substantiate this experiment, he tried the same for several years successively with the same unsurpassing results. He had a field fertilized, cultivated and planted, with the same, all in all, and after they attained the height above described he pinched off the points of the stalks of every second row, repeating it in due season, once more on the branches. In the end of August the rows which had been thus treated were luxuriant and in full vigour, whilst those left to nature were fast decaying and partly dead. It was an object of amusement to him whilst it excited wonder and astonishment amongst his neighbors. The season of digging arrived, and not unlike his first experiment the yield was vastly greater than the rows not so treated, and without disease; whereas the disease had made its appearance again to a vast extent in the rows left to nature.

The expenses in Germany to have the manipula-

tion above recommended performed, are about twenty-five cents per acre, and with due caution is performed by women and children.

The principle of Dr. Klotzsch's experiments is very simple, and as already said, on the ground that when the stalks are rank the roots will be so likewise; he believes secondly, that the stalks by the above operation keep the surface moist, and consequently prevent that parching heat of the surface which after a shower of rain causes the *fireblast*. He believes thirdly, that if the potato plant is left to nature, with but a single or perhaps two stalks to a germ, if even rank, yet as is well known with few leaves are not sufficient to keep up that endosmotic and exosmotic process on which in fact the well being of our plant depends.

It is indeed worthy the attention of Farmers, and all we hope—who may read the views of our authors, will try it next season.

We will discuss the other points above laid down in our next. E. K. BEAVER.

Worcester, Montg. co., Sept. 7, 1853.

P. S.—The mysteries of our assertions in regard to the fly in wheat, has startled your correspondent J. B. Garber, Esq.; he says: "How could the ova or egg remain dormant all fall and winter, and then about the 20th of May crawl up the stem to the second joint." Answering it himself, he infers that "an insect in the ova state evidently has no means of locomotion." We fully agree with Mr. G. as to the locomotion apparatus of the ova, and therefore no crawling up the stem to the second joint, yet we would respectfully suggest, that our ova tribes in general travel without legs according to Harvey and other Animalculists, and that in this instance the ova occupies this place at an earlier date than above said, and as for the necessity of being deposited by its parent *wherever found*, is somewhat different from the ordinary opinions of researchers; we would in conclusion refer him to the article written by "E." of Chester county.

Sept. 1853.

B.

For the Farm Journal.

The Agricultural Department of the Crystal Palace.

NEW YORK, 9th mo. 6th, 1853.

In compliance with your request, when in your pleasant little borough, a short time since, I send you a few lines upon the subject to which your paper has been devoted, and in which you have my most earnest wishes that you may be successful.

The part of community most benefited by agricultural journals, have been very much at fault heretofore, for their almost total neglect of agricultural papers, and have looked with ridicule and contempt upon articles written upon this subject. But the times are changing; men are beginning to learn that

there is something to be gained from the labors of men of science, who are *not really* engaged in farming, but who have studied the *theory of farming*, as well as the common surveyor, who finds their landmarks by a science, that does *not* require that he should be a *practical* farmer to do so.

But to my point. I have spent five days in looking at the Crystal Palace and its contents. I wish every farmer in Chester county could see and have time to examine the agricultural department of the exhibition. The United States is the only nation represented to an extent worthy of notice in this department. And she is well represented in all the articles for farming purposes, many of which ~~ordinary~~ farmers never thought of. The business of plowing, sowing, cradling, and mowing all done by horse power, and by almost every variety of machines.

I shall not attempt a very definite description of any of these machines, implements, &c., as I could not do it without drawings, and even then no one can get as good an idea of them by any plan as that of seeing the *original*.

Amongst a very large assortment of plows, I noticed several different kinds of *subsoil* plows. Some of them consisted of an ordinary beam, and handles, but a very *long*, or rather of a very *deep* set of irons, that they might do their work deep in the ground, in the bottom of the ordinary furrow. But an improved subsoil plow had two plows attached to one beam, the foremost over the smaller, to take off the top furrow and throw it in the deep furrow left by the hindmost and deep running plow the last 'round,' and the hindmost one following immediately after to do the subsoiling. Such a plow is generally drawn by two yoke of oxen, and they leave the ground thoroughly broken up, to a much greater depth than by the usual method of farming.

In conversing with several gentlemen on the advantages of subsoiling, I found as much *difference of opinion* as there is *difference* in the *natural quality* of the land they farmed; this will always be the case, until farmers study the character of these differences of soil, and anticipate different results. Perhaps I shall have something to say to you on this subject across the ocean.

There are quite a number of threshing machines on exhibition with the "concave" above the cylinder, so that the grain goes in *over* the cylinder instead of *under* it.

Several important improvements, or at least changes are made in threshing machines on exhibition, and a W. R. Palmer exhibits an *American Seed and Grain Thresher*, by which the grain is cleaned and run into bags (and measured if desired,) at the same time it is threshed. The peculiarity of the machine is that instead of a *cylinder* it has a central mass of cast iron, somewhat like hub of a wagon wheel, and

into the periphery of this, round iron bars two and a half feet long, are inserted, so as to stand out like the spoke of a wheel. These are made to revolve with great rapidity in a circular wooden box, in which there is just room enough to admit the arms to fly around. At one side of this circular box, is a hole at which the grain is introduced, so that the straw introduced end-ways meets the arms perpendicular to them, and flies around with them in the circular wheel, and goes out at the circumference, immediately over where it went in, but in a tangent to the wheel's motion.

It is claimed that this machine will clean wheat of all its smut, and thresh it much better with less labor, when it is a little damp, than the *ordinary* machine. It is certainly an important change upon the old machine, and as such is well worth the consideration of farmers. It comes highly recommended by those who have used it, for the *above* qualities, as well as for its speed in threshing.

Several kinds of fans for cleaning grain were worthy of consideration. One with glass sides, that enables us to see it in operation, appeared to be a very good one. Another of peculiar construction, separated very nicely timothy seed, clover seed, chaff, wheat and cockle, at the same time; passing the cockle and chaff together, but all the others in separate places, and rendering each one clean. The exhibitor informed me that you intended publishing an account of it in the *Farm Journal*, but that you could not do it justice without a drawing.

The machine bears the name of Salmon's Improved Grain and Grass Separator. I send you his advertisement.

There were also a good number of reaping and mowing machines. One of the reaping machines was very finely adapted for allowing four persons to stand on it, and bind up the grain, as fast as it is cut.

There was also hoes, rakes, harrows, cider mills, hay knives, straw cutters, and a host of other things, which your readers will agree with me, I have not time to describe, when I inform them that I am on board a vessel bound to Hamburg, Germany, and a pilot is now towing us down to the ocean, and I want to send this scrawl back with him.

I have not had sufficient time to write the above carefully, and the vessel going out of the dock has not helped me any, with its thumping about against the other vessels. So farewell till I cross the Atlantic.

Yours with respect,

E. P.

The above communication is from a young man, a practical no less than a well read scientific farmer of Chester county, who goes to Europe to spend a few years to improve himself in scientific knowledge, and particularly in the department of Chemistry, as applied to agriculture, which is his favorite study. If we are not much mistaken, from our knowledge of his abilities, we think he is destined, should his life

be spared, to make his mark in the world, in any thing he undertakes. We are pleased to observe the readers of the *Farm Journal*, will have the benefit of his observations, across the Atlantic.

Great Sale of Imported Stock.

THE NORTHERN KENTUCKY CATTLE IMPORTING COMPANY resolved to sell their recent importation on the farm of B. J. CLAY, near Paris, on the 18th ultimo. Purchasers were restricted to be citizens of Kentucky, and to give bonds in twice the value of the purchase, not to remove it from the State within twelve months. With this limitation, the sale was well attended, and the bidding spirited. The following is the reported list of sales.

The cost of the stock delivered in Kentucky, was about \$23,000, while the aggregate of its sales was \$55,976, a profit of \$32,976! The competition between Bourbon and Fayette for Diamond, the finest bull in the lot, was most spirited, but the nerve of the Fayette men failed them; the Bourbon men would not have stopped bidding under \$10,000.

BULLS.

1. Young Chilton, white—calved in May 1850; cost in England, say \$600, sold for \$3,095, to Wm. Warfield, of Fayette.
2. Diamond, roan—calved in June, 1850; cost \$630, sold for \$6,001, to Clay, Bedford & Duncan, Bourbon.
3. The Count, roan—calved in July, 1851; cost \$525, sold for \$2,575, to S. Goff, of Carlisle.
4. Orontes, red and white—calved September, 1851; cost \$639, sold for \$4,525, to Benjamin Gray, of Woodford.
5. Fusileer, roan—calved February, 1853; cost \$375, sold for \$1,425, to R. W. Scott, of Franklin.
6. Senator, white—calved April, 1852; cost \$630, sold for \$2,000, to Allen & Curd, of Fayette.
7. Belleville, roan—calved January, 1852; cost \$1,050, sold for \$1,500, to George W. Sutton, of Fayette.
8. Challenger, roan—calved January, 1852; cost \$450, sold for \$4,858, to T. Goff, of Carlisle.
9. Fortunatus, roan—calved December, 1851; cost \$275, sold for \$1,800, to George Martin, of Carlisle.
10. Yorkshire Maynard, dark roan—calved in March, 1852; cost \$275, sold for \$1,000 to F. Taylor, of Clarke.

COWS AND HEIFERS.

1. Lady Stanhope, roan—calved in 1847; cost \$275, sold for \$1,500, to Brutus Clay, of Bourbon.
2. Lady Fairy, red—calved in June, 1848; cost \$525; sold for \$1,100 to W. Warfield, of Fayette.
3. Roan Duchess, roan—calved July, 1850; cost \$275; sold for \$900 to W. Brand, of Fayette.
4. Goodness, red—calved September, 1847; cost \$525; sold for \$2,025 to D. Coleman, of Fayette.
5. Gem, roan—calved in April, 1851; cost \$775; sold for \$825 to S. Van Metre, of Clarke.
6. Equity, deep red—calved March, 1852; cost \$400; sold for \$1,000 to James Waller, of Jefferson.
7. Necklace, roan—calved April, 1852; cost \$260; sold for \$805 to Henry Clay, of Bourbon.
8. Bracelet, roan, twin of Necklace; cost \$260; sold for \$750 to M. M. Clay, of Bourbon.
9. Mazurka, dark roan—calved August, 1851; cost \$600; sold for \$3,050 to Benj. Gray, of Woodford.
10. Lady Caroline, light roan—calved July, 1851; cost \$400; sold for \$1,825 to Brutus Clay, of Bourbon.

11. Duchess of Sutherland, red—calved December 1850; cost \$375; sold for \$900 to W. Brand, of Fayette.

12. Maid of Melrose, rich roan—calved October, 1851; cost \$775; sold for \$2,200 to Saml. Humphreys of Woodford.

13. Muffin, red roan—calved June, 1852; cost \$225; sold for \$535 to Dr. Smith, of Scott.

14. Orphan Nell, roan—calved November, 1852; cost \$325; sold for \$1,000 to J. A. Gano, of Bourbon.

15. Flattery, white—calved November, 1851; cost \$325; sold for \$815 to W. R. Duncan, of Clarke.

SHEEP.

Southdown—3 bucks sold for \$775, \$400, \$340, and 3 ewes for \$350, \$180, \$230.

Cotswold—2 bucks \$1,010, \$710, and 6 ewes \$270, \$105, \$221, \$200, \$140, \$200.

Leicester—1 buck \$50, and 2 ewes sold for \$52 each.

HORSE.

Cleveland Bay Horse, (Young Lord,) cost \$1,000; sold for \$2,800.

Franklin County Exhibition.

An Agricultural Society has been organized in this flourishing county of our State, and will hold its first exhibition on the 25th and 26th of October next. Its officers are:

President—Hon. George Chambers.

Corresponding Secretary—James Nill, Esq.

Treasurer—A. K. McClure.

Recording Secretary—Samuel M. Armstrong, Esq.

Also, four Vice Presidents and twelve Managers.

The above should have been inserted some time ago, but the information has only lately come to our knowledge. We should be greatly obliged if the Secretaries or other officers of our different county societies, would keep us informed, or communicate through the *Farm Journal*, any such intelligence, relating to the agriculture of their respective districts. We wish to make the *Farm Journal* the organ of the agricultural interests in all sections of the State. For our means of information, we must depend on the official reports or letters of officers of the different county societies, or in such public spirited individuals as feel interested enough in the great cause of agricultural improvement, as to be willing to communicate a few lines with this object.

We hope to receive accounts of the various local exhibitions held through the State, during the past and present months, and although it will be impossible to publish the reports of committees and premiums for all in detail, yet we shall be pleased to be able to give an abstract of each, and hope some one will be kind enough to forward us the means of doing so.

TO PURIFY A STABLE.—A mixture of Epsom Salts and plaster of Paris is very efficient in destroying the effluvia.

Fences operate in two ways—if good, they are a defence; if poor, an offence.

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

CUTTING WOODEN SCREWS—By A. H. Longley, of Lebanon, Ind.—I claim giving an equal progressive to the cutting tools, in combination with a differential rotary motion, for the purpose of cutting the screws at the same time the hole is bored or the tenon is made as set forth.

LIME KILNS—By S. J. Seely, of New York city.—I claim the process described of calcining limestone in a kiln, by the aid of furnaces and an artificial draught of air, through the furnaces and the kiln; maintained by a mechanical blower.

I also claim the combination of a suction blower at the top of the kiln, and a forcing blower at the bottom thereof, as set forth.

Also, the method of regulating the production of steam, to generate the power for the engine, in proportion to the duty required of it, by setting the steam blower in the same furnace, that supplies the heat, for calcining the limestone, as described.

TRACK CLEARERS TO HARVESTERS—By Wm. F. Ketchum, (assignor to R. L. Howard,) of Buffalo, N. Y.—I claim the scraper or raking board, constructed as described, and combined with the rake piece at an angle less than a right angle, as set forth.

SEED PLANTERS—By Wm. Cressler, of Shippensburg, Pa.—I claim, in combination with the adjustable tubes, the seeding wheel, with its flange and partition, for adjusting, receiving, and carrying the grain and other material to be sown with it, around the opening, whence it is conveyed to the ground.

CONSTRUCTION OF HARROWS—By Lewis Lupton of Winchester, Va.—I claim constructing the frame of a harrow, of double metallic bars, or of flat straps or pieces of metals, and the forming of sockets thereon, by bending the metal, or otherwise, for inserting the teeth or tines, as described, and the uniting the bars, of pieces of metal, and the combining therewith, the manner of bracing or staying the same, by the rod and coupling, as set forth.

MEAT CUTTERS—By Stanislas Millett, of New York city.—I claim the combination of a set of revolving knives or cutters, with the top plate and revolving disc, formed as described, and arranged, and operating so as to effect the sub-division of the matter by the action of the cutters upon it, in passing through the slots in the cover substantially in the manner set forth.

CLOVER HARVESTERS—By J. A. Wagener, of Poltney, N. Y.—I claim for harvesting clover heads without the stalks is the arrangement of the solid or hollow cylinder, set with knives on its periphery, as described, and just near enough to the fixed knife, as to the concave of the fingers, to admit space enough to allow the clover heads to pass through, without being crushed, and so that the combined action of the forward movement of the machine, and the adjustable guard plate, and the knives, the stems may be drawn in and severed close to the heads.

Second, making the teeth, so that they will spring and vibrate, towards or from each other, as described.

REAPING MACHINES—By Cyrus H. McCormick, of Chicago, Ill. Patented Oct. 23, 1847.—I claim placing the gearing and crank forward of the driving wheel, for protection from dirt, &c., and thus carrying the driving wheel further back than heretofore, and sufficiently so to balance the rear part of the frame and the rake thereon, when this position of

the parts is combined with the sickle-back of the axis of motion of the driving wheel, by means of the vibrating lever, as described.

And I also claim the combination of the reel, for gathering the grain to the cutting apparatus and depositing it on the platform, with the seat or position of the rake, arranged and located as described, or the equivalent thereof, to enable the rake to rake the grain from the platform, and deliver and lay it on the ground at the side of the machine, as described.

HARVESTERS OF GRAIN AND GRASS—By Wm. G. Huyett, of Williamsburg, Pa.—I claim the peculiar manner of arranging the two sets or series of knives B and C, the knives, B, being of triangular form or saw shaped, and having a reciprocating motion, and the knives, C, working directly over the knives, B, said knives, C, being attached by pivots to the outer ends of the teeth, and having an opposite reciprocating motion communicated to them at their inner ends, by the lever and cross bar, by which arrangement a drawing cut is obtained, and the knives effectually prevented from clogging or choking, by the grass or straw.

CULTIVATOR PLOWS—By Wm. S. Hyde, of Townsend, Ohio.—I claim the cultivator, as described, with adjustable supplementary wings, so constructed as to cultivate the soil superficially near the roots of the plants, and deeper at a distance therefrom, the wings being adjustable to any required angle with the bottom of the furrow, so as to give any desired degree of inclination to the sides of the ridges or hills, and to change their inclination from time to time, to adapt them to the varying stages of the growth of the plant, as described.

CUTTERS TO HARVESTERS—By J. H. Manny, of Waddam's Grove, Ill. Patented in England, Dec. 9, 1852.—I claim a cutter or sickle, composed of a series of lozenge-shaped blades attached to a bar, as set forth, whereby the pressure of the grass on the front corners of the blade is so counteracted that the latter are not bent down from the edges of the guard fingers against which they cut.

HILL SIDE PLOWS—By David H. B. Newcomb, of Conewango, N. Y.—I claim arranging the two shares of a double plow, which alternately run forward on a central wheel, in such manner that the share, which for the time being is in the rear, shall be carried above the bottom of the furrow, as described.

I also claim the method of relieving the swivel and of steadying and supporting the beam when set, and in turning by means of a semi-circular guide or track arranged and operating, as set forth, in combination with a catch at each end of the track to hold the beam in place when properly adjusted.

BUTTER WORKERS—By E. J. Dickey, of Hopewell cotton works, Pa.—I claim the adjustable knives arranged within the box of said machine, and operating in conjunction with the reciprocating pressure, substantially in the manner set forth.

I also claim the recess or depression in the bottom of the box, for the purpose of preventing the butter adhering to the presser, and being drawn back during its receding motion as described.

SEED PLANTERS—By Lebbens Caswell, of Harrison, Me.—I claim placing the axle of the gauge wheels on a fulcrum, in an adjustable slide, as described, so as to plant at any desired, and the same time a uniform depth, as set forth.

HORSE COLLARS—By W. K. McThornton, of Bloomsburg, Pa.—I claim a horse collar formed with pad flaps by the extension of the face leather of the pads, as described.

I also claim the manner of stiffening and uniting the pads by means of a metallic bow, the ends of which are rigid to stiffen the shoulder pads and support the tugs, while its arch is flat, thin, and flexible in one direction to allow the pads to change their relative distance apart, and comparatively rigid in the other direction to prevent the pads from turning with respect to a plane parallel to the front of the collar.

STRAW CUTTERS—By I. P. Smith, of Rochester, N. Y., and O. W. Seely, (assignors to O. W. Seely,) of Albany, N. Y.—We claim the arrangement of the metallic guide in combination with the knife frame, and the knife formed as specified, and with the frame against whose front edge the knife is intended to play; the last mentioned frame to be adjusted to its place by springs and screws, contained in hollow boxes or ears, and by trunnions and shoulders, as set forth.

MACHINES FOR DITCHING—By R. C. Pratt, of Canandaigua, N. Y.—I claim the ditching machine, consisting of a beam and casing, or their equivalents, in one or more parts, with a cutting and scraping point, hung on the shaft of a revolving wheel, with shovels attached to the outer circle of the wheel, which self act by turning the wheel and forming a bucket in connection with the casing, so as to carry up the earth to the inclined sides, the whole being operated as described.

GRAIN WINNERS—By George B. Salmon, of Elmira, N. Y.—Ante-dated July 6, 1853. I do not claim the blast head or the blast spout separately; neither do I claim the screen nor the trough and spouts separately.

But I claim, first, the expansion of the upper part of the blast spout, into the circular irregular enlarged head with an opening or mouth at the lower extremity, partly covered with the scive, for the purpose of allowing the force of the blast to be exhausted, the screenings immediately falling through the opening or mouth of the head while the blast and dust escape through the screen, the blast being governed by a slide, as set forth.

Second, I claim the arrangement and construction of the graduated sieve of unequal fineness, the portion being protected from the action of the fan blast, so that the small substances, such as cockle, &c., passing through and falling on the bottom board of the sieve, passing off at the trough and spouts, and when the grain arrives at the coarser part of the sieve, it passes through and is acted upon by the fan blast, while larger substances than wheat pass over the end of the sieve, and fall on the floor, as set forth.

HILL-SIDE PLOWS—By J. B. Wilder, of Belfast, Me.—I do not claim a revolving share and mould board attached permanently to each other. But I claim having the mould board so constructed, arranged and attached to the share, and land-side plate, that said mould-board, may be turned, as set forth, independently of the share, and a proper curved outer face be presented to the sod, on either side of the plow, the mould board being constructed with two faces precisely of the form shown.

PLOWS—By William V. Burton, of Orange, Ohio. I claim the manner of securing the points of the land

side, land cutter, and counter side, by the lock couplings or joint formed in the mortise by the curvature of the land cutter, as set forth.

Second, I claim the plow point, and a reversible land side piece, in the manner specified, whereby the land side piece and point is made reversible.

MILLS FOR GRINDING APPLES—By F. B. Hunt of Westfield, Indiana.—I do not claim the employment of the endless belts, irrespective of their arrangement, as they have been long used, neither do I claim the cutters nor cylinder press separately.

But I claim, first, the employment or use of the endless belts, arranged as described, viz: the upper belt, having an adjustable roller, which, upon being elevated or depressed, causes the belts at the discharge ends to be brought nearer together or separated further apart, thus allowing the belts to be adjusted to feed or convey to the cutter all the different articles or substances which at present require each a separate and distinct machine.

Second, I claim, in combination with the two endless belts arranged as described, one or more cutters of cutting cylinder, said cylinders being placed loosely on their axes, and secured by set screws, as described, by which several forms of cutters may be used, according to the work required to be performed.

SEED PLANTERS—By Milton Satterlie, of Louisa, Ill.—I claim the arrangement of the drill and covering wheels, or their equivalents, on flexible axles, so that the said wheels or their substitute will rise and fall to accommodate themselves to undulating ground, whereby the grain in all the furrows, is planted at an equal depth and equally covered, as specified.

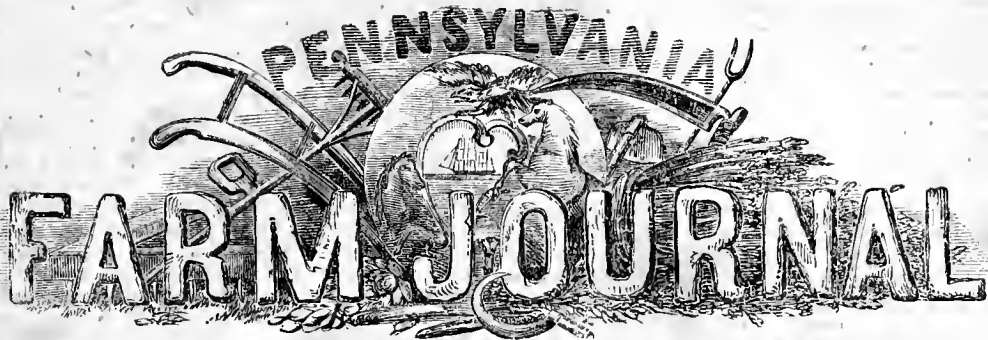
CORN PLANTERS—By Jacob H. Carothers, of Davidsburg, Pa.—I claim the method of stopping the seeding apparatus by grappling the periphery of the driving wheel as described.

BEE HIVES—By Sylvester Davis, of Claremont, N. H.—I claim the manner of constructing the float of two parallel series of lightly separated thin slats placed one directly over the other, and separated by two or three cross slats, and supported by similar cross slats beneath the whole for the purpose of allowing the bees to feed without being liable to be mired in the food beneath.

SMUT MACHINES—By Ziba Durkee, of Alden, N. Y.—I claim the covering of the revolving cylinder, wings, or beaters of smut machines with wire netting or cloth, for the purpose of providing an uneven but smooth beating or rubbing surface, and at the same time give great durability to the said parts, as described.

THRESHERS AND SEPARATORS OF GRAIN—By N. B. Lucas, of Otter Creek, Ill.—I claim the auxiliary screen, placed in an auxiliary position, or nearly so, and projecting from the rear end of the inclined screen, so as to be out of the axis of the blast over the inclined screen, for the purpose of catching and saving the blighted and lighter kernels of grain which may be blown beyond the rear extremity of the said inclined screens, as set forth.

WINNERS OF GRAIN—By Samuel Canby, of Ellicott's Mills, Md.—I claim the construction of the receiving and discharging passages for the grain: that is, the passage at the door, passage I, and passage J, in the manner set forth.



PENNSYLVANIA THE FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

AGENTS.

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the same source. We consider all of them highly valuable for preservation and future reference.

Though there are some matters in each, not expressly adapted to our country, and even in which we have improved in the practice of our cousins across the water, yet there is much minute calculation and experiment, much close and extensive observation, from which the practical farmer here, may deduce important facts, highly useful in his own management.

The ample means at the disposal of the Royal Agricultural Society, enable them to offer liberal rewards, for these prize essays, which thus enlists some of the best talent of the Kingdom. They appear at stated intervals and embrace a wide range.

Prize Essay on the Breeding and Management of Pigs, by Thomas Rowlandson. Extracted from the Journal of Royal Agricultural Society of England.

By naturalists the hog is placed in the class Mammalia, order Pachydermata, and genus Suidæ and Sus; to this order belongs the elephant the rhinoceros, the hippotamus, &c.; all the species feed on plants, and several upon roots, while some of the number, the hog to wit, will, in addition, devour animal substances. The order is thick-skinned, exceedingly acute in the olfactory and oral senses, voracious, and delights in moist and warm shady places. Obtuseness of intellect is generally attributed to the family—possibly unjustly, seeing that the half reasoning elephant belongs to its ranks; and with respect to the genus under notice, it is difficult to say how far its obtuseness is attributable to neglect and maltreatment: naturally the hog is social, and evinces great sympathy for the ailments of its companions—has been known to display an unvarying and warm attachment to particular individuals. The acuteness of its olfactory organs has been made subservient to the uses of man by the truffle-hunter. This faculty has also been made use of in setting game in the two well-known instances of Colonel Thornton and the sow broken-in by Mr. Toamer, game-keeper of Sir H. P. St. John Mildmay. In both instances it was remarked that the scent of the game was noticed by the pig when it had been passed over by the best pointers. The uneasiness displayed by the pig prior to atmos-

Prize Essay on Pigs.

We commence in present number, a prize essay on the Breeding and management of Pigs, by Thomas Rowlandson, extracted from the Journal of the Royal Agricultural Society of England. It embraces the whole subject, from the Natural History and Anatomy of the pig, the various breeds and crosses, their respective merits for conversion into fresh meat, pickled pork, bacon, ham and mode of preparing or curing the same, the best and most economical mode of rearing, keeping and fattening, construction of sties, with the theory of action of various articles of food, &c.

The essay will be found no less important to the American Farmer, and interesting, than the two which have preceded it in the Farm Journal from

pheric changes is well known, and has given rise to the proverb, "that pigs can see the wind." I attribute this circumstance to the extreme nervous excitability of the skin and mucus membrane, which makes this animal feel any sudden atmospheric change more acutely than the majority of our domestic animals. This nervous excitability appears, from other circumstances, to have an important bearing on their economical treatment.

The anatomy and physiology of an animal will generally afford the observer an insight into its habits and character, and we need but a slight glance at the head and face of the hog, as compared with other animals, to convince the observer that strength is one of the principal points had in view: in order to render the snout better adapted to the purpose of turning up roots for its food, an extra bone is added to the nasal one. This is short and trifacial, and placed directly before the nasal bones, with which, and with the edges of the anterior maxillary, it is connected by strong ligaments, cartilages, and muscles. By it and its cartilaginous attachments the snout is rendered strong as well as flexible, and the whole is put into motion by a strong, short, thick neck; the whole structure of the head and neck admirably adapts them for the purpose of grubbing up the soil while searching for such articles of food as roots, worms, &c., which form their natural food: in order, however, still better to perform that office, the snout which terminates the face is strong and muscular, and at its extremity insensible. The position of the orbit of the eye is lateral, giving to the animal a side rather than a forward range of vision, and consequently increased powers of perceiving such articles as acorns, Chesnuts, or other fruits, which may have fallen near his track whilst grubbing up roots, the presence of which his great olfactory sense also makes known to him. The character of the teeth and stomach of the hog shows that it is intended to be an omnivorous animal. It may be said that the teeth are so formed in order to serve the purpose of tearing and cutting tough fibrous roots which may be in its way; and I believe that in the wild state, except when pressed by hunger, the hog subsists almost wholly on vegetables.

The hog has fourteen molar teeth in each jaw; six incisors and two canines; the latter are curved upwards, and commonly called tushes. It is from the stomach that its omnivorous qualities are principally inferred, for which purpose it is well adapted by its pyramidal appendage, glandular structure, and the villous mucous membrane with which it is lined.

The Various Breeds of Pigs.

The wild boar is undoubtedly the animal from which all our breeds of pigs have been derived, and to which type the whole would speedily degenerate were they again left to nature. Leaving out of view that nearly extinct race the Irish greyhound breed, the kind which approaches nearest to the original stock are the large kinds which are known as the Old Hampshire, Berkshire, Lancashire, Suffolk, &c. The modern breeds of Hampshire, Berkshire, Suffolk, &c., are characterized by their short pricked ears, whilst the older Lancashire, Yorkshire, Cheshire, &c., have large flop ears—the old English hog; both kinds were originally covered with strong bristles. There are good grounds for supposing that the "old English hog," with flop ears, was originally the only domestic animal of its kind throughout the kingdom. When or how the short prick-eared Berkshire and Hampshire hog became introduced I have always been unable to trace: the probability is that it has

been obtained by a cross with some of the more Southern European breeds. The genuine old English breed was coarse boned, long in limb, narrow in the back, and low shouldered, a form to which they were most probably predisposed from the fact of having to travel far and labour hard for their food, and undergo considerable privations during the Winter; notwithstanding these ill qualities, I have witnessed in Lancashire, Yorkshire, and Cheshire, instances where the old breed have, through the effects of better care, shelter and food, produced a most valuable animal, the thick flop ears having become fine and thin, the bones of moderate size, the thick coat of stiff bristles converted into a finer description, spread more thinly on the animal, and the skin become fine and ruddy. I have seen this occur where there can be scarcely a doubt that the animal was the aboriginal one, and had never received a cross. Until within a very recent period fine animals of this description were to be found pretty frequently, with the farmers in the counties named. They had several admirable qualities; amongst which were the facts that they were exceedingly prolific and excellent mothers. I have known a sow of this breed have 24 young ones, often 20 and 22, though more commonly from 12 to 18. I have frequently known a sow of this kind suckle 12 to 18; but the common practice when the progeny was so numerous is to force the young ones forward, and kill them as sucking pigs until they are reduced in number to about a dozen. The old sows of this breed have rarely more than 18 teats; and it is not usual to see more than 16 to 18 sucking.

The only disadvantage of this breed is, that they require a considerable amount of food without making an adequate progress for the first 12 or 16 months; after which latter period, if put up in fair store order, there is scarcely a breed that puts on more flesh for the meat given to it than this breed, and it increases to enormous weights, the hams, when well-cured, being of excellent quality. The Berkshire hog was of large size, and is, I believe, now almost extinct. Laurence, in his treatise on Cattle in 1790, describes it as long and crooked in the snout, the muzzle turning upwards; the ears large, heavy, and inclined to be pendulous; the body long and thick, but not deep; the legs short, the bone large, and the size very great. This general description, but particularly "the ears inclined to be pendulous," shows that the celebrated Berkshires are derived from a cross of the old indigenous breed. The large Hampshire breed are characterized by somewhat similar qualities: there is also a smaller and finer or improved Hampshire breed, the result of a cross with either the Chinese or Neapolitan; the whole of which will be noticed when the mixed breeds are taken into consideration. I have introduced the Berkshire and Hampshire breeds in noticing the larger breed; not that I believe either county possessed originally any other breed than the large flop-eared; I have done so more in deference to common opinion, which usually gives that breed a distinct and original character. It will afterwards be shown, however, that the character of the improved Berkshire may be obtained by a cross between the indigenous large breed, and one or other of the smaller ones. Of the smaller breeds there are only two that require any lengthened notice—the Chinese and the Neapolitan. Crosses of one or both of these breeds with "the old English" have produced all our improved varieties of the larger kinds.

The Chinese hog was first introduced for the purpose of improving our native breeds. There are two varieties, the black and white; both fatten readily.

The black variety varies little in appearance from the Neapolitan, the distinctive characteristics being the shorter and thicker leg and much wider snout of the Chinese: their form is a round body, short head, wide cheek, high chin, exceedingly thick skin, covered with fine bristles; it has not a very fine shape, and when fat appears to have no neck, and little more than the tips of the snout can be seen; it is a very gross feeder, eating almost any thing, and if the food given be of an animal and fatty nature the skin will frequently burst in patches, and form scabs on the animal's back, which it will sometimes rub off, displaying its oily fat covering beneath. The pure Chinese is very susceptible of cold, and too delicate to be acclimated in this country; its only valuable quality is its great aptitude to fatten on a comparatively small amount of food of indifferent quality. If fed on farinaceous food, and not made too fat, the flesh is delicate, but if animal food has been much introduced, such as greaves, &c., and highly fattened, the flesh is coarse and the fat oily and disagreeable; they make nice sucking pigs and dairy fed porkers; the latter good, whether used for roasting or pickled pork; they are prolific, but bad mothers.

The Neapolitan stock is the one from which our improved smaller breeds are indebted for their most admired qualities. The Neapolitan pig has a smaller quantity of bone in proportion to its size than any other breed; the colour black, great aptitude to fatten at an early age, and will put on flesh with a moderate amount of food of indifferent quality; in fact, will get into something better than store condition by grazing; they are moderately prolific, and excellent sucklers; average produce of a litter from 8 to 9. I have both heard and seen it remarked that they are bad mothers; whenever I have had an opportunity of tracing such rumors to their sources, I have invariably found that the want of milk has arisen in consequence of being allowed to get too fat whilst with young; in fact, so great is the tendency of this breed to put on fat during the period of gestation, that they will almost get over fat by being merely left in the straw-yard, to which place they are a valuable assistant, being inveterate rooters. This breed is to be distinguished from the black Chinese breed by its larger frame, greater general symmetry, and much sharper snout; in proportion to its size, it is not so long in the body as the Chinese; it is destitute of hairs.

The varied intermixture of the breeds already enumerated constitute the whole of the varieties of swine known amongst farmers, the three grand distinctive features of which are, that for size of frame, but inaptitude to fatten until they are 12 or 16 months old, we must look to the flop-eared old English breed; for very early aptitude to fatten from the time of farrowing until they are 10 or 12 months old, we must resort to the Chinese. If properly kept from the first, this breed will be found to pay best by killing them between 9 and 10 months of age. For symmetry, moderate size, flavour of meat, aptitude to fatten, and excellent nurses, as a self breed, there is none to compare with the Neapolitan; it pays best to kill this breed at from 9 to 12 months old. The improved Essex breed is a slight improvement in the Neapolitan; in external appearance they closely resemble each other.

Notwithstanding the relative and distinctive excellencies of the breeds named, it is possible, by judiciously crossing them, that the excellencies of one kind may be intermixed with the desirable qualities of another; thus the slow fattening quality of the old English breed may be improved by crossing with the

Chinese—in this way the celebrated Berkshire pig was first obtained. A description of the indigenous Berkshire hog has already been given; and in proof of the statement here made I shall quote the words of the author of the "Berkshire County Survey, 1809," who states:—"But excellent as the Berkshire swine undoubtedly are, they are usually crossed at intervals with the Chinese or Tonquin race. Mr. Smith, Sr., of Letcomb Basset, who has studied the breed of native animals for many years, assured me that it was necessary to cross the Berkshire swine once in six or seven generations with the Indian race, or they would degenerate in shape and qualities." By comparing this account of the modern Berkshire with the preceding one given of the old species, we are led to understand that a cross with the Chinese has constituted a marked improvement in the race. Now we know that the modern Berkshire hog has a tendency to fatten at a tolerably early age, and can generally be turned out as fat as he can be profitably made to be by the age of 14 months. Of course I here allude to hogs that have been carefully attended to, and never allowed to fall back from the time they are taken from the sow until sent to the butcher; and as a generally good serviceable hog at all ages, from the sucking pig up to the gammon of bacon, he is scarcely exceeded by any cross or breed. With respect to the subject of crossing I shall extend these remarks to some length, as it is a most important one and the rules and circumstances here laid down and noticed are such as I have always found to apply, not only to hogs but to the breeding of all other animals. In doing so, I shall illustrate the subject by an account of what fell entirely within my own experience. Some years ago I purchased two sows of a cross between the Berkshire and Chinese, containing more of the Chinese than the Berkshire, a circumstance that I did not particularly admire, as I always found that, when the Chinese blood predominates, the frame is sacrificed without a corresponding advantage in the propensity to fatten. At the time alluded to it was, however, the practice to breed very fine in order to obtain a description that arrived at early maturity. I put them both to a very fine Neapolitan boar; in due season one farrowed 10 and the other 11 young ones. I ought to have remarked that the two sows were perfectly white, moderately covered with bristles as far as I could trace the parentage of the sows the whole of their progenitors had been of a white colour; the Neapolitan boar was perfectly black, and devoid of hair; under these circumstances no surprise would have been expressed at seeing the progeny a mixed lot of white, black, and black and white, all of which were to be found, and in addition were some covered with slightly curled bristles of a brown or brownish-red colour, streaked down the sides with deep-brown stripes, something similar to the tiger. The white pigs turned out very good ones, matured early, and fattened on little food, and were something similar to the best types of the cross between the Berkshire and Chinese; not quite so large, however, as this cross is usually seen, but larger than their mothers, which, as I previously remarked, had too much of the Chinese. The black pigs approached their size in character, but had a larger frame; these thrived well, better than any of the other kinds which could easily be noticed, as they were all fed together. The brown species had ears somewhat inclined to the pendulous, and were of a larger frame and longer body than the others; when killed, were much heavier and larger than the rest, but they took a month to six weeks longer feeding. I always considered these brown pigs as typical of the Berkshire

breed; and I have little doubt but if I had been so circumstanced as to have been able to have matched them with their like, that the race could have been perpetuated.

In consequence of having to remove, I was compelled to dispose of the sows and their progeny previously alluded to, reserving only one sow, which at an early period showed all the most desirable characteristics of a good pig; her general form was somewhat similar to the sire (Neapolitan,) but with fuller cheeks, not quite so long but equally fine snout; it was a pig that, had it been exhibited at an agricultural meeting, would have been classed as an improved Essex pig; in fact, I never saw one of the latter breed that possessed points superior to her. My removal was to Ireland, where I was under the necessity in due season to put her to a rough boar in that country; the boar in question was a black one, and possessed too much of the old rough species; but I had no choice,—she produced a litter of six young ones, one white, which turned out similar in form to the improved Berkshire, two were of the red-haired description already noticed, and three were black, one somewhat similar to the sire, two like the mother were made presents of, and were remarkable for keeping in good condition on a small amount of food; their progeny was of a larger description, having been put to boars of a large breed. This cross was much noticed for their early maturity; they proved a valuable lot, fattening to 14 stones weight of 14 lbs. the stone within 12 months. I had a second litter from the same sow and a like coarse boar; the litter consisted this time of 9 pigs, 4 were red and striped, but of a deeper colour than any I had had previously, in fact approaching to deep brown, and the stripes were, to superficial observation, black; four were black, viz: two like the mother and two of a coarser make; one was white; the white one was similar to the best type of the improved Berkshire, attained a large size with ordinary food within 12 months; the reddish-brown ones did not fatten so rapidly, nor attain so large a size as the preceding, but they would have "gone on" at the time they were killed; the coarser black ones were fed two months longer than the others, but when killed did not attain many pounds more weight than the white pig of the same litter; the two that resembled the mother were fat at nine months; all were fed alike, viz: boiled potatoes, afterwards mixed with a little bran, and finished off with ground oats and potatoes; after being taken from the mother they were allowed to run on a pasture (being ringed,) and otherwise only sparingly fed. Under these circumstances the two black ones that resembled their mother threw the best—in fact, became half fat; the white pig also did well; the two coarse black ones grew in size and bone, as also did the four brownish-red ones, but put on no meat until they were put up to feed; when put up, the brownish red ones gave the earliest appearance of doing well. I always considered that this single litter was typical of the qualities of the various breeds of pigs, with the exception of the large flop-eared variety. After the second litter was reared, the sow was sent over to England and put to a boar, as near akin to herself in appearance and breed as could be obtained; luckily, it was one that precisely resembled herself both in colour, symmetry, relative size, and similarly bred, having been got by a Neapolitan boar out of a Chinese and Berkshire sow; the progeny, nine in number, were all black, and completely resembled their sire and dam; all that were kept for fattening were killed in intermediate stages, from porkers until they were ten months old, after which

age it was conceived more profitable to rear young ones on the same amount of food that it took to increase the weight of those which had reached that age, at which time they would weigh ten to twelve stones—they were excellent, whether as fresh pork or pickled, ham or bacon. Three more litters were had from the same sow by boars of like character, the progeny in every instance resembling the parents. Several sows and males were reared and disposed of for breeding, whose progeny were of similar habits and form, and had a like tendency to fatten early on a small amount of food. In the few cases that fell under my observation where they were again crossed, the majority of the litter proved like the parent, and in only one or two instances did I witness the appearance of the red-haired kind already alluded to. There was one fact in connection with that sow to notice, viz: that she was particularly careful in making her bed; as she approached the time of farrowing she would collect a pile three or four feet high, into which she would cover herself along with her progeny after farrowing, particularly if it was cold weather; her sense of smell was astonishingly acute. I mention these facts, as I have observed a like tendency amongst the pure Neapolitan, and I attribute them to the circumstance that this breed approaches the wild species of hog more than any other of the cultivated kinds—a circumstance by no means improbable, seeing that the mild character of the Italian climate would admit this thin-skinned, hairless variety to roam at large without other shelter than the woods, and other food than the acorns, chesnuts, and roots, &c., with which that country abounds: it is to this conjunction of favorable circumstances that I attribute the smooth, hairless skin, propensity to fatten, strong family resemblance and habits, transmitted through many generations until at length they are so strongly marked, that these qualities become intermixed with and transmitted to their descendants when crossed with other blood. From the fact of this breed (the Neapolitan,) maturing on a small amount of food, it is less likely to deteriorate from a sufficient supply being withheld than any other breed; moderate warmth is, however, indispensable, for if it is starved both for want of shelter and food, no race deteriorates more rapidly. The Rudgwick breed, which has been known for ages on the borders of the Surrey and Sussex, have frequently been celebrated for the astonishing size which some of this description have attained; they, however, require to be 18 months to 2 years old before they are fattened; they belong to the old English breed.

Steam Power on Farms,

The Marquis of Tweedale has succeeded perfectly in working plows by steam power. The distinguished English agriculturist, Mr. Meche, in a late article says:—"There can be no doubt but that very shortly every agriculturist must use steam power if he is to stand his ground in the race of agricultural competition. The want of it is already felt if not seen, by those who have not the means or inclination to use it. The time is approaching when a steam engine on a farm will be as common as the drill or threshing machine, although like them, it has to pass through the ordeal of disbelief, doubt and prejudice. A committee of the Royal Agricultural Society give the most extraordinary accounts of the rapid introduction of farm locomotive engines during the last three years.—[Scientific American.

Houghton's Seedling Gooseberry.

This variety, though not large, will always be valued on account of its abundant and regular bearing, and unlike many of the fine English sorts, not being subject to Mildew. It ripens soon after mid-summer. Skin smooth, thin, glossy, of a pale dull reddish brown color, marked with faint greenish lines. We copy from the Boston Cultivator, the following account of its origin:

Messrs. Editors:—I observed in the Cultivator of the 25th June, an account of the "Houghton Seedling Gooseberry," with a drawing of the same. It is there stated, that it originated in Salem, Massachusetts, which is a mistake. The gooseberry was raised by me from the seed in 1833, when I resided in Lynn. It is a cross between our native and some foreign kind. After experimenting there for many years with the most choice foreign varieties, such as the 'British Crown,' 'Empire,' 'Cook's Defiance,' 'Bang Up,' 'Roaring Lion,' and about every other roaring kind, many of which I imported from the London Horticultural Society, nearly all of which proved worthless, on account of their blasting with mildew. Having selected four choice kinds, viz: 'Crown Bob,' 'White Smith,' 'White Rock,' and the 'Red Champagne,' I procured from the woods one of our best native kinds, and planted it in the centre. The second year after planting, all bore fruit, letting the fruit remain on until perfectly ripe, and when it had fallen off I threw over it a slight covering of loam. In the following Spring, the young plants came up in great numbers. I transplanted into nursery rows about one hundred plants, and cultivated them with care for five years.

The fifth year, nearly all bore fruit, the greater part of which was completely covered with mildew; even the bushes themselves were so covered that not a green leaf was to be seen. Having discarded all but the above named one, and having cultivated that over fifteen years, I have felt fully compensated for my experiment and trouble, having found the above named gooseberry perfectly free from blight or mildew, and a constant and enormous bearer; of its other merits, I leave others to judge.

ABEL HOUGHTON.

Cattle Market Abuses.

The Grand Jury of Kings county are occupied with the discussion of a question of vast importance, which should be brought at once before the same body in this city. It is on the maltreatment of cattle by the drovers during their long peregrinations from the West, and by the butchers after they have arrived here.

It is truly said, 'one half of the world do not know how the other half live,' and it is equally true that if one half knew what sort of food they eat, they would cease to live, through very disgust at what they feed upon. What think the beef-eaters of this city of the condition of their favorite food under these circumstances: First they are confined in a crowded space five days on a steamboat, tossing over the waves of Lakes Michigan, Huron and Erie, with but little opportunity or disposition to eat or sleep, though in stormy passages with no lack of chances to drink. Then, by way of change, they are shut up in a railroad car three or four days longer, until almost exhausted in the hot sun, and, as has been proved, in some instances, 57 hours without water. Then they are allowed to drink till they look full and fat enough to stand another day in the cattle market, and en-

sure all the hooking and pushing of infuriated beasts. Then they suffer all the punching and beating with clubs of their unfeeling owners and half savage boys, who drive them through the streets, until they finally reach the pens of the abattoirs, either excited to madness, or so exhausted with want of food and rest, and consequent fever, that bullocks, once as lithe as deer, go like lambs to the slaughter, without resistance.

We have in fact, repeatedly stood by and seen them bow their heads to the fatal noose, with which they had just seen their prison-mate drawn up to the bull-ring, with looks and actions seeming to show that they understood their fate as well as the butcher could tell them, but deemed it a relief their misery. After having been put up in the shambles, snuffing the blood of their fellows for three or four days without tasting food or water, their sufferings may be imagined.

We have read of savage nations who fit their beef for eating by baiting the cattle to death with ferocious dogs. By this they are thrown into a high fever much more rapidly, and hence humanely, than by our steamboat, railroad, and butcher-pen process. But they were savages—we are civilized. They are heathen—we are Christians. Other nations fit their beef for human food by first binding the animal, neck and heels, and then beating him to death with clubs. *This makes the meat tender.* We have a different process of producing the same effect. Theirs is barbarous—ours belongs to an enlightened and humane people, who live in the nineteenth century, and boast of their intelligence, and make laws to "prevent cruelty to animals."

We do not allow a man to beat and misuse his horse, because, if he dies the dogs may eat him. But we do eat beef, and do not ask the question how it is prepared for our delicate stomachs.

If such a singular phenomenon should ever happen in this city, that a Grand Jury should be disposed to ask whether cattle are treated quite as humanely as would be altogether acceptable in the sight of him who made both man and brute, we hope they will send us a polite invitation to attend their investigation. In such case let them not be contented with mere hearsay evidence. Let them personally visit some of the places we can point out to them, where beef is prepared for a people so refined that they would be horrified at the public exhibition of cruelty to animals in the *plaza de toros*, but who pander to worse cruelties every day inflicted upon the animals whose flesh, after being duly prepared and spoiled, will be served up as their own daily food."

If any of our readers partake of these sins, in any form, we hope they will repent forthwith, and amend their ways. Something more than mere taste is concerned in these matters.—[New York Tribune.

SPARE THE BIRDS.—On no pretext whatever, should farmers or gardeners permit their birds to be disturbed. Instead of killing them or frightening them away, they should make use of every means in their power to induce them to increase in number, and become more tame and familiar. The worst of them earn twenty times what they eat; and then, what exquisite pleasure, to have your garden, yard, orchard, or wood, alive and vocal with the music of merry birds. Plant trees for them, build houses if necessary for them, and let no cat, dog, or boy ever molest them, and they will teach you lessons of domestic bliss—preach you sermons—and warble you such hymns as you never heard elsewhere. Be kind to your birds.—Ohio Farmer.

Ohio State trial of Reaping and Mowing Machines.

[The following notice of the trial of reaping and mowing machines before the Ohio State Board of Agriculture, is taken from the columns of the Cleveland Daily Herald, and is the best and most impartial we have seen of this interesting exhibition.

The second Annual Exhibition of Reapers and Mowers, under the auspices of the Ohio State Board of Agriculture, took place at Wooster, on Wednesday. Col. Melary, President of the Board; Hon. J. G. Gest, Secretary; and nearly all the members of the State Board were present. A respectable number of the most intelligent and enterprising agriculturists from various portions of Ohio were in attendance, and several Inventors and Manufacturers of Agricultural Implements from abroad. The occasion was one of marked interest; the weather was fine, and everything was conducted with fairness, good feeling, and gentlemanly deportment. It is to be regretted that a much larger number of farmers did not embrace the opportunity to witness the test of the labor saving machines, but the exceedingly busy season of the year and scarcity of field laborers prevented many from attending. The Reapers and Mowers were all put to a practical test in different qualities of Wheat and Grass, each cutting an acre in the several fields, thus affording a fine opportunity to witness their operation and judge of their comparative merits.

Five Reapers and four Mowers were entered, the first prize being a Gold Medal of the value of \$50. On Wednesday the exhibition took place on the splendid farm of Mr. Stibbs, immediately adjoining the town of Wooster. The farm of 224 acres is most beautifully located on a gentle elevation overlooking the town and rich country adjacent, and is in a high state of cultivation, Mr. S. being not only a practical but a model farmer. His wheat, very heavy, was considerably lodged, and put the Reaping Machines to a hard test. They all cut the grain well, but none of them laid the gavels or sheaves as even as desirable. Even the lodged and tangled grain was pretty well cut, quite as well as could have been done with the common cradle, but in laying off by hand as well as by the Self-Rakers, the straw was a good deal scattered, and required close gleaning to prevent waste. The labor in binding, however, was no greater, if as great, as following the cradle. The man managing the Reapers appeared considerably excited, most of the horses unused to the machines, and in the hurry to cut an acre in the shortest time, the work was more slovenly performed than might have been done under more favorable circumstances. The acres were cut in from 37 to 42 minutes each, but the trial on the whole was not very satisfactory to the Judges and Farmers present.

The meadow of Mr. Stibbs was mainly timothy grass of the first season's mowing, very tall and heavy, and affording a fine field for the Mowing Machine, to operate in. Ketchum's Patent led off, and cut its acre well in 42 minutes. It worked without clogging, cut the grass clean and sufficiently close, and left it evenly spread so as to require no turning to cure perfectly. The Mower is compact and strong, and weighs about 750 pounds. The strength of the machine was put to a severe test in the meadow of Mr. S. It was drawn by a herculean span of horses on a rapid walk, and when in full motion the fingers protecting the knives struck the point of a rock, solid in the ground, with such force as to suddenly stop the team and hold them on the second

pull. Two of the fingers were slightly bent, but not enough to prevent the continued use of the Mower. In another instance the top of a stump in the way of the machine was literally cut off without injury to the knives. Manufactured at Buffalo; price \$110.

Manny's Patent Mower cut the second acre in 49 minutes. His machine is an adjustable Reaper and Mower, and took the first premium of \$50 for mowing at the great trial at Geneva, N. Y., last season. It is a simple and efficient machine, cutting the grass as well as the scythe, and leaving it in a good condition to cure. Like Ketchum's it works in all kinds of grass, and with two horses and one person will cut from ten to fifteen acres per day. Manny's machine is said to be the only successful combination of Reaper and Mower, but the test at Wooster did not show the adjustable machine to be equal to some single Reapers and Mowers. As a combined machine for farmers who are not able to purchase a Reaper and Mower both, it is just the thing. Manufactured at Freeport, Illinois; price \$125.

Castle's Patent Mower was next tested, and for the first few minutes worked beautifully. It cut evenly, close, and rapidly, but soon clogged and began to slip over. The knives clip together like shears, and seem likely to gum up and spring apart. It is an ingenious, simple geared, light Mower, and is said to work well on the plains about Urbana, the place of manufacture. The machine was taken from the ground before cutting its acre. The Mower of Allen, Mintier & Co., was tested for a few moments and withdrawn, owing to some defect.

Thursday morning the Mowing was resumed on the grand farm of Mr. Robinson, consisting of 480 acres, also beautifully located on a eminence in full view of Wooster, and overlooking a great extent of the choicest agricultural country in Ohio. The good condition of the farm of Mr. R. is the best commentary on his industry, enterprise, and skill. The meadow selected had been in grass for years, the bottom generally fine and thick, in some portions clover, in others thin, wiry grass. Ketchum's Mower again led off, and performed its work to the satisfaction of everybody. The acre was cut in about half an hour. Manny's Mower followed cutting the acre in about the same time, and nearly as well. Castle's Mower again started admirably but had to be stopped and tinkered often, and had not completed its acre before the judges, exhibitors and spectators adjourned to the Reaper test. Ketchum's Mower was unanimously awarded the first premium by the Committee. It took the first at the trial at Springfield Ohio, last year, but we confidently anticipated when the first swath was laid by Castle's Mower that Buckeye genius was about to win the prize. Improvements may yet be made in Castle's machine which will enable it to go through future contests as successfully as it now enters upon the trial. Ketchum's Mower is regarded as a nearly perfect machine, and is rapidly advancing in public favor. The past season five hundred were sold, and this season the manufacture of one thousand does not begin to keep pace with the demand. The machine on the ground was purchased by Judge Musgrove, a member of the board from Crawford county, before the exhibition, and after the test it would no doubt have brought \$150 at auction had it been for sale. No second premium we believe was awarded for Mowers.

The trial of Reapers on Thursday was much more satisfactory than on Wednesday. The wheat was even, stood well, and the ground quite rolling. All the Machines cut admirably, and laid the grain much better than the day previous. The first acre was cut

by Seymour & Morgan's Patent for 1853, New York Reaper, in 31 minutes. This machine requires a man to drive and another to rake off the grain. The gavels are laid off at the side, and with great regularity, by an expert raker. It is worked with ease, has a light draught, and can cut from 15 to 20 acres per day, with one span of horses, and do the work better than is done by ordinary cradling. Manufactured at Brockport.

MAYN'S Patent Adjustable Northern Illinois Reaper and Mower cut its acre of wheat well and rapidly, the grain being laid off at the side by a raker. This Reaper took the second prize of \$30 at the trial at Geneva, N. Y., in competition with eleven other machines, and the first prize, a silver medal, at the Ohio State Fair. Over 300 of these machines were in use the past season, and the demand is daily increasing.

PALMER & WILLIAM'S Reaper and Self-Raker, 1853, patented in 1851, attracted much attention. It required but a single person to work it, as by an ingenious, yet simple arrangement, the grain is laid off at the side in gavels in such a size as the driver chooses to deliver them. In partially lodged grain; Wednesday, an acre was cut in 42 minutes; in the standing wheat, Thursday, in 36 minutes. The delivery of the grain was very good on Thursday. Manufactured at Brockport; price \$138.

The simplest constructed reaper on the ground was Hussey's Improved Patent by Ball, Autman & Co., Canton Ohio. It does its work very rapidly, cuts clean, and is not liable to get out of repair. A driver and raker are required, the gavels are laid off evenly in the rear, but it is necessary that the binders should follow the machine so as to remove the grain before the horses return for another clip. The acre of partially lodged grain was cut in 37 minutes; the standing on Thursday in 33 minutes. The Hussey Reaper has been tested for years, is popular with farmers, and finds a ready market.

Atkin's Automaton, or Self-Raking Reaper and Mower, attracted the attention of everybody whenever in motion. It comes nearer to a human reaper than anything made with hands, and does its work fast and well. It was tried successfully in the harvest of 1852 in the vicinity of Chicago, and was awarded first premiums at several State and other Exhibitions. The striking feature of the machine is an automaton arm, terminating in a rake, which seizes the grain as the reaper moves along, and by a rotary movement lays the gavel off regularly at the side, then extending itself, returns to its work, reminding one strongly of the active intelligence exhibited by the power printing press in laying off the printed sheets. The Self-Raker scatters the grain somewhat in disposing of the gavels, but not much more than the machine rakes by hand; and it is less work to glean and bind after the Automaton than after the common cradle. It is the invention of Mr. Atkins, an old millwright at Chicago, who has been bed-ridden for ten years and never saw his remarkable piece of mechanism in operation. The Automaton has been patented in England. Price at Chicago \$175.00. It is not warranted as a Mower, but works very well it is said.

After a full and fair test of all the Reapers exhibited, the committee, as we understand, unanimously awarded the first premium, a gold medal of the value of \$50, to Seymour & Morgan's New York Reaper. No second premium was awarded, the committee being divided in opinion between Palmer & Williams' Reaper and Self-Raker, and Hussey's Improved Patent Reaper, by Ball, Autman & Co. The

world-famous McCormick Reaper was not exhibited, the proprietor choosing to rest on his English laurels which we believe have not been brightened by any American competition encountered since the London Fair.

Several improved Agricultural Implements for which no premiums had been offered were on the ground, among them a boggy-like Hay Rake ingeniously adapted to wheels so that the raker rode leisurely over the field smoking his pipe; Killam & Vallean's Patent Wheeled Cultivating Gang Plows, made at Scottsville, N. Y., said to be the "most useful improvement which has been made in plows since the issue of Wood's old patent; and Borst's Improved Grain Drill, manufactured at Wadsworth, Medina county, and which took the first premium at the State Fair last fall. The price is \$50, and the demand is so increased that the manufacturers will dispose of 250 this season.

Who is David Taggart?

One David Taggart, of Northumberland, Pa., is amusing *himself*, (we presume,) in the Farm Journal, *a la* Miner and King, in throwing soft-shell "bricks" at us. We are not apprised of the "war" he alludes to, at all—and rather reckon he doesn't read the papers! Will the editor of the "Journal" inform us who is David Taggart, whar' he comes from, and what business he has (if any) with *our* affairs?

In answer to above enquiry in the New England Cultivator, we reply, David Taggart is one of our most intelligent correspondents, corr. secretary of a County Agricultural Society, well posted up in all matters relative to rearing Poultry, the different breeds, &c., and moreover, writes with a steel pen, and is able to use it, either on the offensive or defensive, with great vigor and effect.

From some cause or other, the agricultural press north and east of us, seem to have got into a condition of mutual recrimination and distrust, not only on the qui vive for something or somebody to attack; but actually *quite eager*, judging from the above, for a fray, and some new opponent, to practise their skill upon. Remaining in a kind of armed non intervention, when not openly engaged in hostilities, they have become suspicious, and *imagine* themselves attacked personally in their paper, when one ventures to express a mere *difference of opinion*. We hope sincerely none of the belligerents are going to make a descent upon Pennsylvania, for although there are none but militia men and raw recruits here, past experience has proved, some of these can act efficiently in an emergency. To read the pages of some of our cotemporaries at the north, and the way they *keep* at it, to the *non* edification of their readers, one is reminded of the Irishman with his favorite shillalah, who merely stopping to ask if it is a *free fight*, jumps right into the middle of the fray, and lays about him with a hearty good will, from the pure abstract pleasure of the thing.

If there are any classes of people in the country, between whom there might be supposed to be a close

affiliation, a common bond of union, it is between a "Working Farmer" and a "Country Gentleman," a "New England Cultivator" and a "Northern, or Genesee Farmer," and if there is any periodical in whose pages one should expect *not* to find a record of harsh language and personalities it is a "Journal of Agriculture," and one whose motto is "to improve the soil and the mind."

When we received the August number of the Working Farmer, turned to the leader and saw the caption of several of our contemporaries names all buddled together we concluded, that in order to save time, their heads were all to be cut off at a single blow. Having a distaste for capital punishment, we turned away, and have not had courage to examine the article since. Whatever was the result, it appeared to us our friend Professor M. had a hostile intent on that occasion, and if they escaped with only marks of the super phosphate about their persons, they are fortunate.

It is time for a truce, Gentlemen, bury the hatchet, drop into line, contend together for the common cause, let, the super phosphate to the practical farmers, who will tell *you* more about it after a while than you can tell *them*. Like all other wars, yours when ended if ever ended, will leave us about as wise as when you began. We hold that discussions on agricultural subjects should be as "impersonal as Geometry." In the convention in this State, to reform the constitution some years ago, we were present at one of the sittings, when one of the most able and influential debaters, moved a very simple proposition which gave rise to several hours animated discussion, enlisting the best talent of the house on each side, when the mover rose and stated, that when he made the original motion, he understood the case perfectly, but since the very *lengthy and luminous* discussion, which he had listened to with so much pleasure, his mind had become so confused and darkened on the subject, that in order for further reflection, on behalf of himself and several of his friends in a similar predicament, he moved to adjourn.

HOW TO DRIVE AWAY MOLES.—Take 1 lb. of bean meal, 3 oz. of slacked lime in powder, $\frac{1}{2}$ oz. of powdered verdigris, and 4 oz. of essential oil of lavender. After mixing thoroughly the powdery part of the composition, incorporate the oil. With a little water work the mixture into a dough. With this form balls the size of hazel nuts; they will harden after having been exposed to the air for twenty-four hours. Introduce them twenty or thirty feet apart into the mole's runs, or one ball may be dropped into the hole of each mole-hill, taking care to cover it up immediately. The smell of these ingredients is so offensive to the mole, that he immediately deserts his ground. The mixture is, at the same time, a violent poison for moles, rats, and all such vermin.—*Flore des Serres.*

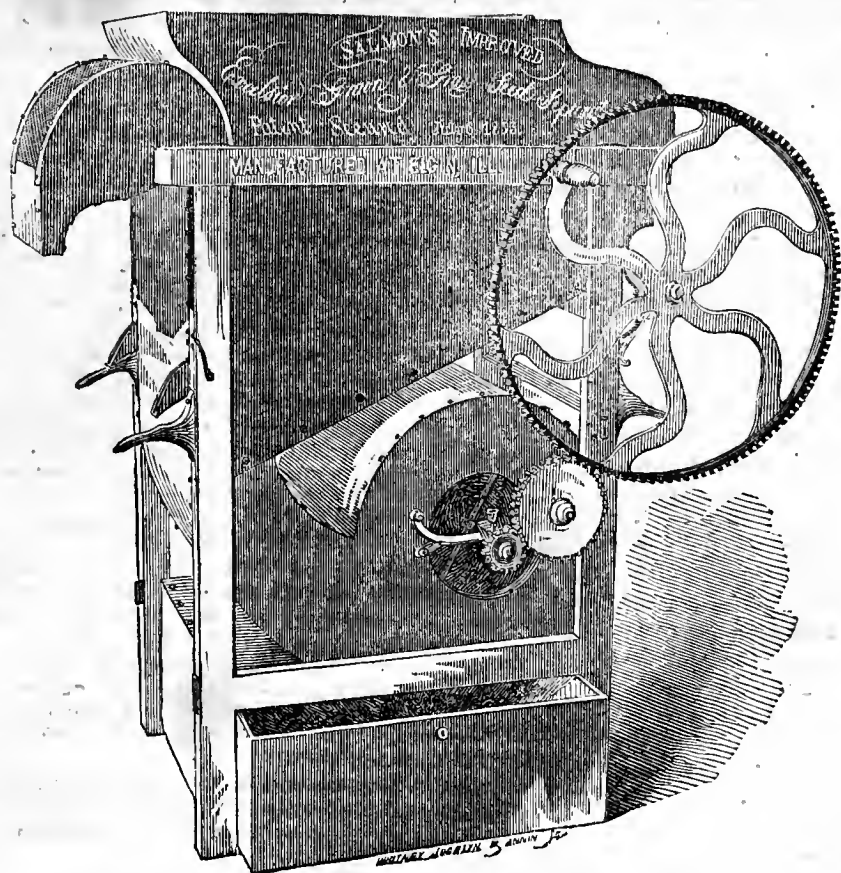
Orchard Grass.

We have no wish, "per se," to prevent the sowing of Orchard Grass, in Illinois, or any where else, if its introduction will be of any public advantage, but observing in the last "Prairie Farmer," it is highly commended, we merely state our experience with it, which may go for what it is worth. Other farmers in this vicinity who have tried it, entertain the same opinion.

We object to it, partly for the very reasons, the editor of the Farmer, commends it, viz: "its strong pushing tendencies both in wet soil and dry," and that it will take care of itself with a medium chance." This we found to be too true, as we devoted one of our fields to it for several years, and to our great loss. We consider it the most worthless grass within our knowledge, either for pasture or hay. It is said that it must be pastured close, and not allowed to get up. We never could induce our cows, cattle or horses to eat it if they could get any thing else. They commenced bauling as soon as they were turned into it, and continued uneasy till they were turned out. White and red clover, timothy, green grass, (*Poa Pratensis*) in the same field would all be eaten quite bare, while a strip of orchard grass, would be allowed to run up to seed, and remain untouched. Some years ago a farmer in this county, who exercised merely a supervision over his farm, without, personally attending to the details, was boasting of his Orchard Grass Hay, "*that it would last longer and go farther than any thing else.*" On further enquiry, of the man who fed the stock, it was found that the reason was, because every animal refused to eat it, and it was left till spring and then had to be used for litter.

We do not know, how on *chemical analysis* its nutritious properties would compare with other grasses, but in such a case we would rather trust to the instincts of animals, than to the manipulations of the chemist. In a practical sense we do not consider it nutritious or valuable, and when it once gets possession of the ground, spreads rapidly and is very difficult to get rid of. It is also very apt to grow into tussocks, whether sown thick or thin. It does not grow much more rapidly than the ryegrass, "*Lolium Perenne*," which is superior to it in every respect, and stock are so fond of, they will leave every thing else, to go to; the direct counterpart in this particular of the Orchard Grass. The only place we can conceive of where Orchard Grass would be at all desirable, is in pastures for droves of cattle or sheep, contiguous to large cities, and where they are obliged to stop a few hours, over night, to be *filled up, not fed*, before going into market.

Tobacco leaves put around the body of perch trees, just beneath the surface of the ground, are recommended as a preventive of the worms that destroy the trees by eating the bark.



New Grain Fan.

The accompanying cut represents the improved Grain Separator, alluded to by our correspondent, E. P., in present number of Farm Journal, on exhibition at the Crystal Palace. Many farmers who have seen it there, speak of its efficiency and simplicity in the highest terms. We will advise our readers so soon as some arrangement is made for its introduction and sale in this State. The present object of the Patentee being to dispose of State and county rights.

The New York Tribune, in speaking of this machine, says:

"This machine is very unlike the fan-mill above described, though answering the same purpose, and even effecting much more, for by slight changes in the force and direction of the blast, wheat can be separated from chaff, cockle, garlic, smut, white heads, and other impurities, as well as from grass seed, saving that and separating the different kinds of grain and grass from one another. The wind wheel is made of iron, sixteen inches in diameter, eighteen inches long, and is placed in an air-tight trunk at the bottom of the frame, which is three feet ten inches high, two feet wide, and two feet ten inch-

es long. The wind wheel is driven by a cog wheel two feet diameter, which gives the fan great velocity, sending the air up a tight trunk, through which the grain is falling from the sieves, which are not shaken sideways, like the common fan-mills, requiring a good deal of extra room, but are jogged in front by a cam on the shaft of the driving wheel. The sieves, five in number, for different grain, are made fine at the end where the grain first strikes them, to let through fine seeds, and coarse at the other end, through which the wheat falls on the inclined plane, and through the wind-spout into a receiver at the bottom. The wind-spout at the back of the mill can be closed in part, or wholly, by which a little blast is allowed, or all turned out through the sieves.

This machine is very simple in its construction and operation, and worth the attention of Farmers and Millers who desire something better and equally cheap as the old fashioned Fanning Mill. It is quite portable, as may be seen by its size, and the weight is from 125 to 135 pounds only; of one of the size of that exhibited. It was patented in July of the present year, and originated in the great wheat region of Northern Illinois, where the want of a perfect grain cleaner has long been felt—the wheat from Chicago

being generally several cents below that of this State, on account of the very imperfect manner in which it is cleaned.

This promises to be a very valuable improved machine for all wheat growers. Let them look at it, and hear the owner's explanation."

The Farmer's Machine is used by hand, and is capable of cleaning from fifteen to forty bushels per hour.

It will separate from wheat, chaff, cockle, pigeon and red-root seeds, smut-halls, dead kernels, and the majority of oats and garlic, and all other impurities.

It will clean oats, peas, beans, corn, barley, rye, garden seeds and rice. It will separate oats from peas, beans and corn, and any two seeds where there is a material difference in size and weight.

It will clean all kinds of grass seeds and clover, and separate clover from timothy; also, separate yellow seed from flax seed, and all other impurities.

The Miller's Machine is similarly constructed, and is propelled by machinery with less than half horse power, and is capable of separating from 50 to 200 bushels per hour, according to size.

It will do equally as good work as the Farmer's Machine, and has been amply tested and well recommended, and found worthy of a place in all good Flouring Mills.

This machine, with only a part of its present improvements, received a diploma at Utica, N. Y., State Fair, last Fall.

The Proprietor, G. B. Salmon, will be found at the Crystal Palace during its opening, or at 93 West 13th street, New York.

PRICE OF MACHINES:

For Farmers,	\$25
" Millers, that will clean 50 bushels per hour,	75
" " " " 100 " "	125
" " " " 150 " "	150
" " " " 200 " "	200

All communications addressed to 93 West 13th street, or after the close of the exhibition, to Elgin, Illinois, will be promptly attended to.

Splendid Poultry.

We had the pleasure a few days since, of examining a lot of forty-two pairs of fowls, raised near this place, for our friend Aaron Clement, of Philadelphia, and which were about starting to Philadelphia in the cars. They were Cochin China, and white Shanghai varieties, and take them all together, were about the best lot for their age we have yet seen. Some of them were really model fowls, well proportioned, of great size, and their appearance indicated, purity of blood. A. C. informs us that they have been bred from the most reliable sources. They will be held for sale at his residence, South street above Ninth, Philadelphia.

He also acts as agent for the purchase and sale of

improved breeds of cattle, sheep and swine, and to those at a distance, who have occasion to purchase, we can say from our own knowledge, his judgment and experience are entirely reliable.

Destroy the Apple Worm.

The present season will be a good time to diminish the number of the apple worm.

As there will not be so many apples, as usual, of course, there cannot be so many of these insects propagated, and an opportunity thus offers to thin off the remainder, so that the apples which grow another year, will not be so much infested with them.

There are several ways by which this may be done. One way, is to let hogs or sheep run in the orchard, which will be likely to eat the apples which these worms cause to fall, and thus destroy them.

Another mode is to gather up the wind-falls, and either throw them over to the hogs, or cook them and mix them with the swill that you feed to the hogs, and thus be sure to destroy them.

There is another way by which many of them can be entrapped and killed. These worms sometimes leave the apple while it hangs on the tree, and crawl down the trunk in search of some convenient place, to spin their cocoon, in which to undergo their transformation, in a miller or moth state.

If you place a woollen rag in the crotch of the tree, the worms in their journey down, will be very likely to come in contact with it, and finding it warm and comfortable, will be likely to crawl under it, and spin cocoons there.

They can then be discovered by lifting up the cloth, and thus easily destroyed. It is worth some little pains to diminish their numbers at this time.—[Maine Farmer.

County Fairs in Ohio.

To give an idea of the work there is to do in the Keystone State, to enable her to keep up with the times, we mention on authority of the Ohio Cultivator, that seventy county Fairs are to be held this fall in Ohio, and that out of eighty-eight counties in the State, seventy-five have an organized Agricultural Society. This exceeds that of New York by one half, and is three or four times as many as any other State can boast of. It seems but comparatively a few years ago, when Ohio was considered the far West, and now at her State Agricultural shows—the people are counted by the acre.

A NEW CATALPA.—Dr. Warder, in the August number of the Western Horticulturist, gives an account of a new variety of the Catalpa, which he ground owing in Dayton, O. It blooms two or three weeks earlier than the other variety. The bark of the young trees is lighter in color, the foliage of a deep green and more luxuriant; the seed pods much longer; the form of the tree more upright and compact, the flower larger and a purer white. They are very plenty in Dayton, where they were first introduced some years since by Dr. J. Haines, from two trees which he found on a farm two miles south of that city. Where the original trees were obtained is not known.—Ohio Farmer.

An Abstract of an Address

Delivered by Governor Emerson, M. D., before the Chester County Agricultural Society, on Saturday, the 17th of September, 1853.

American husbandry may be viewed as consisting of two systems, the first or simplest being that carried on where the fertility of the virgin soils on recently reclaimed lands exacts little else than mere culture to produce good crops. The second system is that which has to be adopted on lands long used and more or less impoverished, where fertilizers of various kinds have to be applied, with all the assistance that can be gained from improved implements and labor-saving machines. The great discoveries made of late years by scientific investigators in the analysis of plants and their resolution into the primary elements were referred to, the nature and properties of lime in its different states, were explained, together with its applications. The practical bearings of a few simple principles were given, the chief of which was solubility to secure efficient activity as a fertilizer. The modes in which this may be secured was pointed out. Reference was made to the injurious effects produced by applying lime in a quick state upon heaps containing animal manures. To prevent the escape of ammonia from stables, sinks, and manure heaps, plaster has been used, scattered in and over them. But a better method is to sprinkle these occasionally with diluted sulphuric acid in the proportion of one pint of acid to eight gallons of water. Gypsum or lime in the state of a sulphate is extremely insoluble. In many sections of our country it appears of no value as a fertilizer even when applied to clover and the grasses. In others it is so highly prized in consequence of its actual or supposed fertilizing virtues that almost any price would be paid by farmers rather than go without. During the war with Great Britain, plaster in Pennsylvania brought as much per ton as Peruvian Guano does at the present day. He dwelt upon the supreme efficiency of phosphate of lime as a fertilizer, and the immense quantities of it carried to England from this and other countries in the form of bones. These and other kinds of fertilizers which the English import every year in such immense quantities enable her farmers to raise immense crops. Premiums have been given in England for 88 bushels of wheat, 80 of barley, and a 108 of oats per acre. The existence of a bone trade in this country and the extent to which it is carried on, were mentioned. Bones dissolved in sulphuric acid are far more active than when applied in their ground state. The agriculture of this country suffers immense loss from the bones allowed to be exported. As much as 700 tons of bones have been carried away from Philadelphia to England in one vessel, which, if converted into a super-phosphate would give a dressing to 7000 acres.

One of the most important movements in agricul-

ture at the present day is the rapid extension of the use of concentrated fertilizers. To increase the efficiency when applied to the wheat crop, Doctor Emerson has had a manure chest adapted to a Drill, from which the fertilizer is made to drop into the same tubes with the seed-grain, both falling into the same row so as to be covered together. By thus securing the proximity of the seed and its fertilizer, the Dr. expects to obtain greater effects from a moderate application, than can be procured from a much larger amount spread broadcast. Jethro Tull's system of thorough culture, cannot make crops grow well where the elements of fertility are absent from the soil. The priest may pray over the ground for an increase, but his prayers will be of no avail without they be accompanied by the application of manure. The Dr. dilated upon the vast importance of Brimstone to the arts and manufacturers as well as to Agriculture, and the immense quantity of sulphur carried to England to be used chiefly in the arts of peace, little, comparatively speaking, being employed to make gunpowder. As sulphuric acid is the Keystone of many of the most important manufacturing processes which enrich Great Britain, it is becoming of immense importance to agriculture, founding the basis of nearly all the best concentrated fertilizers. Sulphur in the United States pays an import duty of 15 per cent. In England where they know their interests better it is admitted free. Dr. E. has used no less than 8000 lbs. of strong oil of vitriol the present year in the preparation of fertilizers for his crops, which he reports as extremely luxuriant. He adverted to the superior skill of British farmers as enabling them to employ more capital on their farms than is usually done in the United States. Besides the millions expended in the purchase of bones which are brought from the ends of the earth. England imports not less than six or seven millions of dollars worth of Guano every year. As every ton of these enable her farmers to raise several tons of grain, and animal food, this proves an admirable method to reduce the amount of importations from abroad for which money or goods would have to be paid.

The English not content with gathering fertilizers from the ends of the world, do not stop here, but import also the master spirits who can instruct them to make the most of their resources. The invitation extended to the celebrated Dr. Leibig of Germany, to come over and deliver a course of lectures was a special honor paid the science for its illustration of agricultural subjects hitherto resting in deep obscurity. The invitation to Professor Johnson of England by the New York State Agricultural Society was a similar recognition of improvements effected in husbandry through facts developed by scientific investigators. Dr. urged strongly the advantages now to be derived by farmers from the perusal of good books, which ought to be distributed by Agri-

cultural Societies in place of the paltry sums commonly offered in money.

In this country where every farmer is a freeman with high privileges to look after, it becomes him to improve his mind. This he cannot do without books which are not only requisite for his own instruction but for that of the children entrusted to his care. It is only when physical power is directed by proper intelligence that it accomplishes its greatest results in agriculture as well as all other branches of the industrial arts.

Experiment with Guano, Pure and Mixed, on Wheat.

A correspondent of the New York Agricultor, dating Accoma, C. H., Va., June 18, 1853, says:

"Last Fall, when sowing my wheat, I laid off four contiguous parcels, of one-sixth acre each, to which I applied the following substance, viz:

No. 1. Guano alone, 25 lbs.

No. 2. Guano 25 lbs., Plaster 6 lbs.

No. 3. Guano 25 lbs., and peck charcoal in half the quantity of Guano by measure.

No. 4. Guano 25 lbs., moistened with strong lime.

Otherwise they were treated precisely alike. The substances were mixed the day before application.

"I have observed them closely, and the results are as follows:

Until this Spring, I could perceive no difference; then I found No. 1 and No. 3, taking the lead of the others, and they have continued to do so till the present, when my wheat is nearly ready for the scythe. If any difference exists between No. 1 and No. 3, I think No. 1 is rather taller and ranker, while No. 3 has rather longer heads.

"My object in these experiments was to ascertain whether the effects of Guano are enhanced by admixture with "fixers" of ammonia. I was, on chemical principles, an advocate for adding plaster or charcoal; but these experiments seem to indicate no improvement in the case of one of the substances, and a deterioration in that of the other, as compared with Guano alone. This guano and Plaster question has been a bone of contention among chemists and agriculturists. Only one experiment, however, I do not consider conclusive, and next Fall I intend to institute others."

Treatment of a Rose Bush.

I have possessed for many years a very fine grafted Rose bush of the kind called *Cloth of Gold*; these possess the peculiarity of blooming finely and freely, with very large flowers, when in the green-house; but in the open air the roses are not nearly so remarkable. My bush began to run some three years ago very rampantly; but my gardener regularly cut it down to produce grafts from, losing the roses. I determined to "make an example" of the specimen, and proceeded as follows, with what results you shall hear.

I planted the bush under the drawing-room front window, and made a plant-case, covering the sides with bark to make it sightly. As soon as heavy frosts set in, I bent down the stem and fixed it there with a pronged stick, covering the whole, which had now a fine head, with glass. Being near the door, and under constant observation, I treated it as is usual with salad or cucumber beds—that is, I gave

it plenty of air when the sun was on it, or the air was sufficiently warm.

The result has been, my pet has been raised up in the spring in the most extraordinary vigor, health, and beauty. This year it came forth with eighty-four enormous buds, followed by giant flowers, so much so that it became a perfect show to the neighborhood. I branched the runners to stakes, and it now measures twenty-one feet in length, and next year will mount to the second story on a special trellis. It is now perfecting a second series of buds, and will continue to bloom till late in the fall. I may add, that I have watered it and my other roses once a week with a solution of sulphate of ammonia, in the proportion of one pound to thirty gallons. Lovers of roses will do well to try the experiment with *Cloth of Gold*, *Saffiana*, *Solfatare*, &c. J. J. S.—*Germantown, Pa.—Horticulturist.*

Super Phosphate of Lime.

We continue to hear from various quarters, of some of our best, and most observing Practical Farmers, who have tried Professor Mapes' Super-phosphate of Lime. They speak to us of its effect on corn, oats, wheat, grass, vegetables, &c., in the highest terms. In many cases, it has proved superior to Guano, in a comparative trial along side of it, and especially for pasture. Whether this article could, or could not be manufactured in England for \$100 per ton—whether this or that or the other analysis is correct, are questions which need not be discussed in the Farm Journal. What we care to know is its value for farmers, by its effects on their crops. If assured on this point, our readers will be satisfied. In addition to many experiments we might mention by others, we have tried it ourselves, this season on oats, 200 lbs. to the acre, on corn applied in the hill and on vegetables, all with satisfactory results. The cradlers in cutting the oats, remarked there was double the quantity on that portion.

Since the introduction of Professor Mapes' article, several others have appeared in Philadelphia and New York, under the name of Super-phosphate of Lime. We do not know that they have been yet fully tested by farmers, but we shall be happy to communicate to our readers any results from their use. It is said they are equal to Professor Mapes', this being considered a great recommendation. We should like to hear from those who have tried them.

How to Subdue a Vicious Horse.

On looking over some old papers the other day we came across the following, which if true, is worth knowing. It seems that a fruitless effort was being made in a black-smith shop to shoe a vicious horse which resisted all efforts, kicked aside every thing but an anvil, and came near killing himself against that, when by mere accident, an officer returned from Mexico, was passing, and being made acquainted with the difficulty, applied a complete remedy by the following simple process.

"He took a cord about the size of a common bed-cord, put it in the mouth of the horse like a bit, and tied it tightly on the top of the animal's head, passing

his left ear under the string, not painfully tight, but tight enough to keep the ear down and the cord in its place. This done, he patted the horse gently on the side of the head, and commanded him to follow, and instantly the horse obeyed, perfectly subdued and as gentle and obedient as a well-trained dog; suffering his feet to be lifted with entire impunity, and acting in all respects like an old stager. The simple string, thus tied, had made him at once as docile and obedient as any one could desire. The gentleman who thus furnished the exceedingly simple means of subduing a very dangerous propensity, intimated that it is practised in Mexico and South America in the management of wild horses. Be this as it may, he deserves the thanks of all owners of such horses, and especially the thanks of those whose business it may be to shoe or groom the animals."

Extracts from an Address

To the Citizens of Franklin county, Pa., by Hon. George Chambers.

The prejudice with many farmers, against book learning and science applied to agriculture, is to be dispelled as unworthy of their intelligence. If we do not read agricultural books and essays on improvements in farming, we will be closing our eyes against the light and be behind the age in which we live. . .

We might refer to many examples of a sudden impulse give to agriculture in this country within the last few years, by the publication of geological surveys. There are several instances attested by increased agricultural products in whole districts of country. One is in the marl region of New Jersey, where the discovery was made, by Prof. H. D. Rogers, of the Green Marl, a sand abounding in Potash, and as a valuable fertilizer has been used to a great extent in New Jersey, to the great improvement of a sterile soil, and with striking advantage. The discovery of the abundant calcareous marl deposits, by Prof. Wm. B. Rogers, in Eastern Virginia, has led many Northern and Eastern settlers to that worn-out region by the benefits to be derived from this marl manure. The discovery of the phosphate of lime in New Jersey and New York will not only benefit the farming interest of those States, but is of such value, as the basis of a permanent fertilizer of the soil, as to bear transportation with profit even to Europe.

There was a time within the memory of farmers now living in Franklin county, that when Plaster of Paris was first introduced for agricultural purposes, it was ridiculed by the majority of farmers, as a *catch-penny* of no benefit. And at the same time the prejudice with many was against the introduction of the red clover crop, as a new thing that would not pay cost. Many preferred the "good old way" of their fathers, in having on their fields the red sorrel, pigeon weed, and other abundant weeds, and not only opposed the cultivation of clover, but were disposed to charge on the fine clover fields of the neighborhood an epidemic disease that one season spread over the country. Yet it is that clover crop, and improved husbandry over the "old way," that rescued from sterility and barrenness a large portion of this county—its former proprietors having sold their ancient homesteads for a trifle, and sought other homes at an early day on the new lands of Western Pennsylvania and elsewhere. Improved husbandry since, on the lands deserted, a great part of which is on the waters of the Antietam, has made them the most fertile and valuable in the county.

An intelligent farmer profits by his observation and experience in the cultivation and improvement of his soil, and why shall he refuse to be informed of the result of the experience of others, which may be to his advantage? He wants to increase his agricultural products at the smallest cost, without exhausting his soil beyond his means of restoration. Every discovery or improvement in cultivation, or in restoring to the soil the ingredients withdrawn by the crop, which is made by the farmer or the Chemical Professor, and which may lessen labor, economize time, and introduce a better system of culture, is to be encouraged as a benefit to the farmer and the community. Yet this knowledge and discovery the farmer may be able to learn only from agricultural publications. The experience and the discoveries of others, by such publications are brought home to every farmer and his family, if disposed to read and learn. One enterprising farmer will not do much good in his own neighborhood by his experimental labors, but through the agency of the press, the beneficial result of those labors will be made known in remote places, to the advantage of those who are desirous of information in their occupation from every source.

County Exhibitions.

Philadelphia Agricultural Exhibition will be held at the Rising Sun, three miles north of Philadelphia, on Wednesday, Thursday and Friday, the 19th, 20th and 21st of October. The premium list is a large and liberal one.

Montgomery County Exhibition will be held at Springtown, on the Reading Pike, two miles northeast of Norristown, on Wednesday and Thursday the 12th and 13th days of October.

Warren County Exhibition will be held in Pittsfield, October 5th and 6th.

Union County Exhibition, (the first one,) will be held at New Berlin, on Thursday and Friday, October 13th and 14th. David Taggart, Esq., of Northumberland, will deliver the address. A wise selection.

Vicious Cattle.

The common vice of jumping and throwing fences is taught to cattle, with scarcely an exception, by their owners and caretakers. Fences half down, soon fall by the rubbing of cattle, and teach the first lesson, especially if cattle have any shrewdness in observing cause and effect. Very fine feed just over a poor fence, is the next lesson; letting down bars and rail fences to the halves, from laziness, so that the animal has to leap, is the third lesson—and this last is often first, second, and third with sheep, until they will scale anything. These three lessons are usually enough, but a fourth is often added, namely, placing one additional rail on the fence each successive day, as they become more skilful, for the ostensible object of keeping the jumper within bounds, but really operating as a most ingenious contrivance to teach the art of vaulting. We have heard of French being "taught in six lessons;" but very few animals require more than the above four to enable them to take "French leave" of any ordinary enclosure.—[Country Gentleman.

There is no more honorable occupation than agriculture—none more heathful or more useful.

Artificial Manures.

As Patent Manures and Fertilizers are springing up in every quarter, and with "a *real scientific* analysis to accompany them, are being urged upon the notice of our Farmers, in handbills, circulars and advertisements—we copy the following well written article from the English Agricultural Gazette, as quite appropriate to the times here. There are some very valuable hints in it.

It seems English Farmers, who like the generality of Farmers every where, are more used to the Farm, than the laboratory, are also liable to be "*vietimised*."

We commend a proper caution in purchasing to much extent of *new and untried* artificial manures.

What science bestows ignorance wastes, or altogether rejects. This is a truth founded upon the accumulated experience of centuries; and which, even in the present day, is continually receiving fresh confirmation in the mistakes and failures which occur in every department of human industry—mistakes and failures which a very slight acquaintance with scientific truth would have prevented altogether, or at least rendered less disastrous. "A little knowledge is a dangerous thing," but the apothegm is not complete unless we add that the loss the knowledge the greater the danger. *Science with Practice* is emblazoned on the crest of the largest and most influential of our agricultural societies, and the union in the motto of the head to think and the hand to execute illustrates in a forcible manner the grand idea which that society proposes to work out in process of time. But, notwithstanding all the light which is constantly diffusing itself from the centres of scientific effort, there are many so-called practical men who hold by the converse of the English Agricultural Society's motto, and who consider that Practice without Science should be the watchword of the rent-paying farmer. That "one ounce of practice is better than a whole ton of theory" is an assertion which has often done duty for argument; but how far this choice morsel of logic is correct is best illustrated by the records of that department of farm practice which embraces the details of purchasing and managing what are called special manures, whether light or heavy, damp or dry, organic or inorganic. Upon no subject in agriculture has chemistry "rung its changes" with such unceasing but fruitless industry as that of the value of manures. Not only have all the proximate and useful elements been separated by analysis, but, in addition, they have been lotted, ticketed, weighed, and priced, in order that there may be no difficulty in determining the worth of any manure of which the seller furnishes an analysis. How many tons of *practice* will it take to analyse and determine the value of one *ounce* of guano or superphosphate correctly? Not all the accumulated practical or empirical agricultural knowledge from the days of the first tiller of the soil, down to the present hour, has been able to solve the problem contained in the question—What is the food of plants? Chemistry has certainly not made plain all the mysterious processes of vegetable life, but it has thrown a flood of light upon the composition, comparative value, uses and abuses of those substances which form the food of plants. Much of this light is, however, obscured or lost by the want of a sufficient amount of intelligent appreciation of the practical uses to which it may be applied. It is a somewhat affecting spectacle to behold an experienced farmer,

deeply versed in the mysteries of marketing, utterly helpless when the printed analysis of some manure or other is placed in his hands. Experience has taught him how to calculate the weight of an ox with admirable precision, merely by the use of his sight and touch, and to work up a Turnip field with a nicety that can scarcely be surpassed even in the trimmest market-garden; but experience conveyed through the external senses can no more enable him to know the value of a manure from its analytical composition than it could the unlettered Arab of the desert to decipher the inscriptions of Nineveh of Kouyunjik by gazing on them, though it were for a life-time.

An instance recently came under our notice of the utter uselessness of chemical analysis to the farmer, when not accompanied, on his part, by some slight acquaintance with its practical uses. A sale by auction of artificial manure had been advertised to take place on a certain day of June last, in a town situated in a somewhat *far-north* county of Scotland. The owner of this manure had, with a most praiseworthy honesty, previously obtained an analysis of his manure from Prof. Anderson, of Glasgow, and on the day of sale printed slips of this analysis were freely distributed among the assembled farmers. The manure itself was contained in bags, and in appearance somewhat resembled good Bolivian guano, but possessing a peculiarly putrid odour, not unlike what would be imparted by a mixture of crushed bones or rotten eggs in an active state of decomposition. Its composition was as follows:—

Water,	- - - - -	18.48
Organic matter and ammoniacal salts,	- - - - -	11.85
Phosphates,	- - - - -	12.94
Carbonate of lime (chalk,)	- - - - -	27.90
Alkaline salts,	- - - - -	14.32
Sand,	- - - - -	14.51

100.00

Ammonia, - - - - - 1.23

This trash was bought up readily by several well-educated and intelligent farmers, at prices varying from 4*l.* to 5*l.* per ton, as a manure for this year's Turnip crop; and in one or two cases it was bought on speculation to be held over to another year. A very slight acquaintance with the mode of calculating the value of a manure, from analysis, as made known in public journals by Professor Way and other agricultural chemists, would have shown that its real value did not exceed 55*s.* per ton when compared with Peruvian guano at 9*l.* 16*s.* per ton. According to the very lowest mode of calculating the value of manures—by the ammonia, phosphates, and alkaline matter they contain—the value of a ton of this artificial manure and guano will stand thus:—

Artificial Manure which Sold at 90*s.* per ton.

Ammonia in a ton, 27½ lbs., at 4½ <i>d.</i> =	£0 10 3¼
Phosphates " 290 lbs., at ¾ <i>d.</i> =	0 18 1½
Alkaline salts " 320½ lbs., at 1 <i>d.</i> =	1 6 8

Value per ton, - - - - - £2 15 1½

Peruvian Guano.

Ammonia in a ton, 390 lbs., at 4½ <i>d.</i> =	£7 6 3
Phosphates " 540 lbs., at ¾ <i>d.</i> =	1 13 9
Alkaline salts " 162½ lbs., at 1 <i>d.</i> =	0 16 4½

Value per ton, - - - - - £9 16 4½

From this comparison it appears that the artificial manure which sold so readily at 90*s.* per ton was alkaline salts, in reality as dear as Peruvian guano at

16*l.* per ton; and were we to calculate the ammonia of each at 6*d.* per lb., as many of our best chemists do, the result would be that the inferior manure would be worth 2*l.* 18*s.* 6*d.*, while the Peruvian guano would be worth 12*l.* 5*s.* 1*½d.* But the former was bought at 4*l.* 10*s.* per ton, hence it cost as much as the latter at 18*l.* 17*s.* per ton. Ammonia and phosphate of lime are considered to be the two principal substances in the composition of a manure for Turnips, while alkaline matter is not supposed to be essential as an application in the growing of this crop; hence, if we exclude the latter from the foregoing estimates, the result will be that the artificial manure, which sold at 90*s.* per ton, really cost as much as Peruvian guano at 31*l.* per ton.

Another view of this subject will place this transaction in a somewhat amusing light. In every 10 tons of the so-called artificial manure the purchasers carted some nearly 3 tons of chalk and 1*½* tons of sand; and if the extra per-centage of water over what is contained in good dry guano be taken into account, it will appear that, while one-half of the manure was utterly worthless, the other half was not equal in value to the very poorest sample of Patagonian guano.

J. H.

To Young Ladies.

P. T. Barnum offers a list of premiums to be competed for by young ladies under twenty-one years of age, at the Fair of the Fairfield County Agricultural Society, to be held the first week in October, at Stamford, Ct. "There are seven premiums for horseback riding, ranging from \$25 to a gold pencil, open to unmarried ladies under twenty-one, from all parts of the State; three premiums for butter, three for cheese, three for bread, five for darning, and four for shirt making, which are to be competed for by the young ladies of Fairfield county only. No fee will be required from any person competing for any of the Barnum premiums."

For the Farm Journal.

Analysis of Soils by a Practical Farmer.

Those persons who have devoted themselves to Agricultural chemistry, appear to be satisfied, that plants, select from the soil, such substances, as are required for their growth, and that growth vigour and perfection are in proportion as those substances are furnished by the soil. That the system of manuring as at present practised is injudicious,—manure being often applied at considerable expense, with little or no benefit, if not positive injury—at other times manures of great value are neglected or lost, when they might be advantageously used or exchanged with neighbors to their mutual benefit.

These declarations are not denied by the Farmers neither are they exactly believed. Their continued incredulity, seems to their friends as an hopeless obstinacy, engendered by ignorance and sustained by prejudice against Book farming. The farmers neither deny or believe this either.

These feelings and views exist and have existed a long time, and like the system of manuring complained of, are somewhat of an injury to all concerned, and which in all probability, can be easily improved or removed, when the exertions of our scientific

friends assume a more practical form, and are more earnestly responded to by the Farmer.

As a member of the farming interest, I will make an advance towards effecting a better understanding between the parties in order that we may labor harmoniously and in concert. That the reasons of our scientific allies in reference to the action of plants in selecting their food and injudicious manuring, are so coolly received and their suggestions for improvement so little heeded, is not owing to their ignorance, or prejudice against Book farming, but rather to a prudent caution with which experience has taught them to receive innovations, on customs long sanctioned by practice, as well as the wrecks of many schemes that have been presented to them, for making two blades grow in the place of one, with little expense and less labor.

Enough has been written to prove as far as writing can prove, that the yield of land would, or rather should be increased by adapting a new, or changing the old system of manuring, as well as to set by the ears, the several advocates of change and improvement, but not one line as far as I have seen for putting the scheme or schemes in practical operation.

It is easy to tell the thirsty man to go to the well and drink, but if there is neither pump or draw, he may be compelled to thirst on, and it is just as easy to tell the Farmer lamenting over a lost crop, to go and get what his land lacks, that it is only some ingredient that belongs to the failed plant—but there is no available way to him for finding what the wanting ingredient is.

There is no practised or skilful person to undertake the analysis, and I know from the little experience I have had in the manipulations of chemistry, it is the easiest thing in the world to be mistaken.

I therefore propose to be one of ten Farmers who will raise one hundred dollars to pay a suitable and qualified person, who will undertake to analyze a certain number of specimens of our soils if such a person can be had.

The task of selecting such person to devolve on a committee of our scientific friends, this we ask as a favor feeling not only our incompetence to judge of the merits of chemists, but the great importance of not being victimised by unqualified persons.

And if after a certain number of trials it is found the suggestions for manuring on scientific principles is what is promised for them, and we fail to adopt them, then will we richly deserve all the contempt such obstinacy and prejudice merits, but until there is a pump or draw in the well we must be excused from going there for water.

TREDYFFRIN.

The above article probably contains the views of a large number of Farmers, who have been under the same difficulty, are willing and anxious to be instructed by their scientific friends, but know of no avail-

able way of finding out the disease of their soil or of applying a remedy. In Maryland, a State Chemist is employed at a fixed salary, to analyze soils for their farmers, free of expense. A similar arrangement we believe is about being made in Delaware and New York, and we hope also soon in Pennsylvania. The project of a Farm school, will be renewed at our next legislature with better prospects of success, the bill for which of course should embrace the appointment of a competent State chemist. There is also another class of farmers, who in the language of our correspondent, have been "victimised" by unqualified persons, and we have reason to believe a pretty large class too. This has a tendency to induce distrust of theories however beautifully worked out in the closet, but which have not been found available or successful in the practical operations of the field. Like the subjects of Patent Medicines, the *few* cures, have been prominently published, and the *many* failures omitted. We do much doubt, whether agricultural chemistry has yet reached that point, where the exact deficiencies in a given amount of soil, and the precise amount and quality of remedial agents or fertilizer's, can be detailed with the accuracy of a Physicians recipe, for his patient, and with the same certainty of results. There have been cases where the scientific chemist has been at fault altogether. Many of the processes of vegetable life, and chemical combinations in the soil, are concealed from observation, and affected more or less, by external causes, changes of weather, &c. As a case in point, one of our friends in an adjoining State, an excellent farmer as well as close observer, lately informed us, that in his neighborhood, *formerly* noted for its large crops of Indian corn, it now would not grow to make it worth cultivating, being affected with rust, and the roots appearing unhealthy, would skin off like a diseased potato. A chemist in Philadelphia on analyzing the soil, recommended Guano and lime as what was wanting. This had no effect, but an accidental application of Potash in the hill, made a great change and produced fine large and luxuriant stalks of double the size of the balance of the field.

Farmers, by experiments like the above on a small scale, can often do much for themselves, and with the view of aiding our correspondent from Tredegar and others, we make the first step by giving the annexed table, of the constituents of several of our cultivated crops which have been ascertained by careful analysis, and can be relied on. This shows what the crops require, without which they cannot be grown, and on the sufficiency of which in the soil, or otherwise depends their healthy condition, and amount of return for labor and capital. The next step to ascertain whether the soil is adapted by its composition, to their growth, and which of them, the farmer can, as before remarked do something by experiment for himself, and can also be often aided by a competent

chemist. The analyses of soil in some neighborhoods or sections and overlaying certain kinds of rock exhibits very much the same inorganic constituents, sufficiently so for practical purposes. A division of a State into geological districts, with an analysis of the soil peculiar to each would be highly useful to the farmer. Some progress was made, a few years ago in a geological survey of Pennsylvania, by authority of the legislature, and then abandoned. The agricultural no less than other important interests require this to be completed without delay, and as, if we recollect rightly Gov. Bigler in his last annual message, recommended it or some similar aid to agriculture, we hope something may be effected the coming winter. To meet the proposition of our correspondent to be one of ten, to contribute \$100 for a competent analysis of soil in his neighborhood, we have made some enquiry in Philadelphia for an agricultural chemist, and will report in another part of the Journal if successful. We now give the analysis of 1000 parts of the ash of some of our most common crops. It will be observed that the straw of Wheat, Barley, Rye, Oats, contains a large per centage of silica, a deficiency of this in the soil, occasions what is generally termed "lodged grain."

	Wheat.	Barley.	Oats.	Rye.	Corn.	Potat's
Potash,	237	136	262	220	325	657
Soda,	91	81		116		19
Lime,	28	26	60	49	14	20
Magnesia,	120	75	100	103	162	53
Oxide of Iron,	7	15	4	13	3	5
Phosphoric Acid,	500	390	438	495	449	126
Sulphuric Acid,	3	1	10	9	28	136
Silica,	12	237	27	4	14	42
Chlorine,		trace	3		2	42
	998	997	999	1009	997	1006

1000 parts of the straw containing as follows:	Wheat.	Barley.	Oats.	Rye.	Corn.
Potash,	125	92	191	173	96
Soda,	2	3	97	3	286
Lime,	67	85	81	90	83
Magnesia,	39	50	38	24	66
Oxide of Iron,	13	10	18	14	8
Phosphoric Acid,	31	31	26	38	171
Sulphuric Acid,	58	10	3	8	7
Chlorine,	11	6	3	5	15
Silica,	654	676	485	645	270
	1000	963	1008	1008	1002

Sawing Machine.

W. D. Carr, Sr., and W. D. Carr, of Corning, N. Y. have invented an arrangement of the cross-cut saw, by which it may be operated by a single man. The saw-frame or carriage is placed upon horizontal ways, which rest upon the block or log to be cut. The saw is fed to its work by means of weighted rods at each extremity, passing loosely through the carriage. A reciprocating motion is given by a crank and rod.

Measures have been taken to secure a patent.—[Scientific American.]

TAPIOCA PUDDING.

To three pints of scalded milk, put in eight table-spoonsful of Tapioca; let it stand three hours, when add four eggs, season to your taste, and bake for half an hour. Use any sauce your fancy or taste shall dictate.

Third Annual Exhibition of the Pennsylvania State Agricultural Society at Pittsburg.

We have just returned from the *Third Annual Exhibition* of the Pennsylvania State Agricultural Society, and sincerely congratulate its officers and members upon the complete success which has attended their efforts to establish the agricultural reputation of our great State. We have the unprecedented fact to announce, that the farmers of Pennsylvania have, in the space of less than three years, attained an excellence in their annual exhibitions at least equal to that of their brethren in other States, and which requires double, and in some instances treble that time to reach. It is doubtful whether a more successful exhibition has ever been held in the United States. The attendance was immense. It was estimated by those familiar with crowds that more than *one hundred thousand* people were present on Thursday. We certainly never saw so many human beings within a single enclosure, nor has it ever been our good fortune to meet so quiet and orderly assemblage.

We reached the grounds on Tuesday morning, and although anticipating excellent arrangements, were not prepared for the imposing scene there presented. Every thing calculated to promote the comfort and convenience of exhibitors and visitors had been carefully attended to.

Immediately opposite the main entrance stood *Mechanic's Hall*, an immense and really imposing structure, tastefully ornamented with evergreens, and surmounted by a handsomely carved American Eagle. To the right and left of this Hall were arranged the agricultural implements, while directly in its rear was another large building, filled with articles full of interest and value, such as locks, safes, decorative iron work, fancy railing, burial cases, &c. Still farther in the rear was the ring for the exhibition of horses, and one of the most attractive features of the whole grounds.

On the rising ground to the right of *Mechanic's Hall*, were *Floral Hall*, the Hall for Domestic Manufactures, Vegetable Hall, Dairy Hall, and a spacious tent for the exhibition of farm produce generally. A little to the left of the last stood the Poultry Coops, while extending completely around the eastern, southern and western limits of the enclosure were the stalls for horses, cattle, sheep, swine, &c.

The President's and other small tents were appropriately arranged in various portions of the grounds, the whole forming a scene of great beauty and interest.

Our limited space will not admit of more than a brief general notice of the various points of interest, which we regret. In our next we may be able to particularize.

The display in *Mechanic's Hall* was perhaps one of the finest ever made in our country. Here the manufacturing spirit of Pittsburg shone in all its

glory, and an examination of the various useful and truly beautiful articles exhibited, conveyed to the stranger a better idea of the enterprise and skill of the inhabitants of the "smoky city," than a month's sojourn within its busy walls could have done.

Floral Hall was the most attractive. Here, the skill and taste of the fair ladies of Pittsburg were most admirably displayed. It was one hundred feet long by fifty in width, and abounded with displays of elegant ingenuity. In the centre, stood an elliptical platform, on the top of which was erected a Moorish Temple, the outside covered with moss and handsome decorations. Around this platform, as well as around the walls, were displayed choice fruits, designs, flowers, &c., while on the top, surrounding the temple, were handsomely arranged specimens of the handiwork of the ladies. The walls were covered with fine oil painting, immense mirrors, elegant needle work, &c. The pillars supporting the hall, looked beautifully amid the profusion of flags, streamers, bouquets, &c., which were clustered around them. The Society was indebted to Mrs. A. W. Loomis and other ladies of Pittsburg and vicinity, for the rare elegance of *Floral Hall*, and to them are justly due not only the thanks of the Society, but of the hundred thousand pleasant visitors who thronged its beautiful portals during the entire exhibition.

In the rear of *Floral Hall* stood a very large tent, for the exhibition of articles of domestic manufacture, such as quilts, specimens of raw and manufactured silk, woollen, cotton and silk stockings, &c. An idea of the number of articles exhibited here may be formed from the fact, that this tent, although nearly three hundred feet in circumference, was completely filled. Many of the articles were of rare beauty and merit, and the whole formed a most pleasing exhibition of female skill and taste.

Adjacent to the last was another capacious tent, set apart for the exhibition of green house plants, &c. Although not so well filled as the last, the specimens were, many of them, very fine and beautiful, attracting marked attention.

At a short distance to the left stood *Dairy Hall*, a small tent filled to its utmost capacity with the products of the dairy. We had anticipated a larger display in this department. The quality of the butter, cheese and honey, however, was excellent. We would respectfully suggest the propriety of having more enlarged accommodations for dairy products, as the small tent was densely crowded during the entire exhibition.

The Poultry Department was well represented, and here competition ran high. Nearly two thousand fowls were exhibited, many of them remarkable for beauty and size, and all of them giving marked evidence of care in breeding.

Of Horses there was quite a large number on exhibition, and their quality better than at any of the

preceeding fairs. The large ring prepared for the display of their good points, was surrounded by an eager and admiring crowd from the opening to the closing of the exhibition, while the frequent cheering gave evidence of the spirited contest between the competitors inside. We shall have more to say of these hereafter.

The display of Cattle was also excellent, and deservedly attracted attention. The Short Horns predominated in number and quality. A few Devons and Alderneys only were offered, but the display of natives and grades was large and good.

The Implement Department was well filled, though the number of new implements was not large. A few valuable improvements in Straw Cutters, Smut and Threshing Machines, were offered, but the great attraction of this department was Atkin's Automaton Self-Raking Reaper and Mower. It was an object of universal interest, and whenever it was put in operation, admiring crowds followed or surrounded it. We cannot describe the wonderful ingenious arrangement of this machine. By it the grain is deposited in beautiful order in the rear of the machine, in bundles sufficiently large for sheaves, and ready for the hand of the binder. The reaping and mowing parts are also greatly improved, and the whole machine exhibits the wonderful triumph of genius.

Perhaps the best filled department amongst the stock, was that of Sheep. Of these the display was remarkably fine, and decidedly in advance of any former exhibition. The most praiseworthy care appeared to have been taken in their management. The Western part of Pennsylvania is as well adapted to wool growing as any section of the Union, and the only wonder is that more farmers have not taken hold. A single glance at the fine specimens of Pennsylvania sheep on exhibition, could not have failed to satisfy even the most skeptical upon this point.

Of Swine the number exhibited was not large, although some were very fine. The great Western States appear to have so completely monopolized the pork business, that the raising of Swine in the East is confined to the family wants of individual farmers.

We cannot close this hasty sketch without expressing our thanks to the officers for the many courtesies extended us. The Police were attentive and polite to all, and what is worthy of special note, is the fact that of the one hundred thousand persons who thronged that large enclosure from Tuesday morning until Friday evening, not a single case of drunkenness nor of ungentlemanly conduct presented itself.

To Mr. McSkimmons, the gentlemanly Agent of the Pennsylvania Railroad Company, we are indebted for many kind favors. By his untiring energy the facilities for transporting visitors to the fair grounds were largely increased. More than *thirty thousand* people were carried in the cars on Thursday, and

twenty thousand on Friday. Besides this immense thoroughfare, every avenue to the grounds was crowded with vehicles and pedestrians.

We present to our readers all the reports we could procure, up to this time. We are compelled to go to press, after deferring publication ten days, in the hope we could present them *all* in this number.

CATTLE.

Short-Horns.

1st Best Bull	H A Pendegast,	\$20
2d do do	Adam Fisher,	15
Best do between 2 and 3	Ira Sherwin,	15
2d do do do	James Kelley,	8
Best yearling Bull	Nathan Ewing,	10
2d do do do	Seth A Bushnell,	5
Best bull calf,	Seth A Bushnell,	5
2d best do	James McKelvy,	3

Cows.

Best cows	James Aull,	\$20
2d best do	James McKelvy,	10
Best heifer between 2 and 3 years	David Quail,	15
2a best do do	H A Pendegast,	10
Best heifer between 1 and 2 years	H A Pendegast,	10
2d best do do	David Quail,	5
Best heifer calf	Nathaniel Ewing,	5
2d do do	John Hodgson,	3

Devons.

Best cow	Nathaniel Ewing,	\$20
Best bull	Nelson Bartholomew,	10
2d do	George W Smith,	10
Best heifers between 2 and 3 years	G W Smith,	10
2d best between 1 and 2 years	G W Smith,	10
2d best between 1 and 2 years	J F Garrard,	5
Best heifer calf under 10 months	Nathaniel Ewing,	5

Ayrshires.

Best bull between 1 and 2 years	to John Walker Jr., Elizabeth,	\$10
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Alderneys.

Best bull	to William C Denny,	\$15
Best cow	to W C Denny,	20
2d best do to	W C Denny,	15
Best heifer between 2 and 3 years	W C Denny,	15
2d best do 1 year	Robert McKnight,	10

Natives or Grades—Bulls.

Best bull	Alexander Morris,	\$12
2d best do to	Harmony Society,	10
3d do do to	John Harrison,	8
Best bull between 2 and 3 years	John Morrison,	4
Best bull do 1 and 2 years	Thomas McClanahan,	6
Best bull calf under 10 months	Marshall Vandervort,	3
2d do do do	Thomas Smith,	1

Cows.

Best cow	Marshall Vandervort,	\$12
2d do	Harmony Society,	10
3d do to	John S. Smith,	8
Best heifer between 2 and 2 years	James Shaw,	10
2d do do	David Quail,	8
Best heifer between 1 and 2 years	to Harmony Society,	6
2d do do	David Quail,	4
3d do do	George Fortune,	2
Best calf under 10 months	James Sloan,	3
2d do do do	C Wise,	1

Working Oxen.

First premium	to Paul A Way,	\$12
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Fat Cattle.

Best pair fat cattle to Harmony Society,	\$15
2d do do do	10

Milch Cows.

Best milch cow Jonathan F Garrard,	\$20
2d best do do to John H Ewing,	15
Discretionary premium to John H Ewing,	10
Discretionary premium to D S Williams,	10

Saxony, Spanish and Merino Sheep.

Best Saxony buck S S Brownlee,	\$10
2d do do J G Streat,	6
Best yearling buck do	10
2d do do do	6
Best pen of ewes J S Brownlee,	10
2d do do J G Streat,	6
Best pen of ewe lambs S T Brownlee,	10
Best Spanish Merino buck James Slocum,	19
2d do do do George H Crawford,	6
Best pen of three ewes James Slocum,	10
2d do do Daniel Kimble,	6
Best pen of three yearling ewes James Slocum,	10
2d do do do do do	6
Best buck lamb do	10
Special premium for a fine woolled buck Daniel Kimble,	5

Wool.

First premium for fine Merino wool to J G Streat,	\$5
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French Sheep.

Best imported buck William Brady,	\$15
2d do do Daniel Kimble,	10
Best native buck to Hugh Wilson,	10
2d do do John Johnston,	6

Imported Ewes.

Best ewe, to William Brady,	\$15
2d do George S Hayes,	10
Best native three ewes James Morrow,	10
Best pen of lambs to Jno. H Ewing,	5
2d best to Hugh Wilson,	3

South Down Sheep.

Best buck to Joseph Cope,	10
2d best to do	6
Best ewes to do	10
2d best to Robert H Powell,	6
Best lambs to Joseph Cope,	10
2d best do Jonathan F Garrard,	6

Leicester Sheep.

Best buck to Robert H Powell,	\$10
2d do do to John Harrison,	6
Best ewes to James McKelvy,	10
2d do do to Jesse Garrard,	6
Best lambs to Jesse Garrard,	10
2d best do to John Harrison,	6

Cotswold Sheep.

Best ewes to John H. Kinnard,	\$10
Do lambs to do	10

Oxfordshire Sheep.

Best three ewes to Daniel Bonsal,	\$10
2d best do do	6

Mixed Breed Sheep.

Best buck to Powell & Bradley,	\$10
2d do to James S Negley,	6
Best three ewes to Jonathan F Garrard,	10
2d best to George W Smith,	6
Best lambs to James McKelvy,	10
2d best do John McKelvy,	6

Fat Sheep.

Best fat sheep to Powell & Bradley,	\$8
2d best do to Joseph Cope,	5
Best under two years to Joseph Cope,	6
Special premium to Wm. Tesh for 20 fat sheep,	12
Do do to Jesse Garrard for pen of South Down ewes,	5

Swine.

Best boar two years to Alfred Quinett,	\$10
2d do do John Eicher,	5
Best sow two years J O H Denny,	10
2d do do R Paterson,	5
Best boar one year A McCready,	10
2d do do do	5
Best boar six months, E Neild,	10
Do sow six months, do	5
Do pigs two and a half months, John H Ewing,	10
2d do do Benjamin Hickman,	8

Small Breed Swine.

Best boar six months old Alfred Vancey,	\$10
2d best boar do do do	5
Best sow six months old Thomas Rowley,	10
2d best sow do do do	5
Best sow 2 years old John Conley,	10
Best boar one year old J S Negley,	10
2d do do do	5
Best five Bakewell pigs eight weeks old Benjamin Hickman,	10
Special premium to David Irwin for two Suffolk pigs,	3

Stallions and Brood Mares.

Best stallion heavy draught to J Snyder,	\$30
2d best stallion to Mr Lightcap,	20
Best stallion quick draught to J T Ladd,	30
2d best James A Fleming,	20
Special premium to James Reed for quick draught stallion,	20
Best stallion for saddle to Augustus Baylle,	30
2d best to Brown, Spencer & Co.,	20
Special premium to Mr Pendegraft for stallion for light draught or saddle,	10
Best brood mare to Jacob Byerly,	30
2d best do John Alexander,	20
Best light draught brood mare to Jameson Beatty,	30
2d best Eli Nell,	20
Best brood mare for saddle to James G Strain,	30
2d best to James T. Ladd,	20
Best stallion for heavy draught three year old to William Cook,	20
2d best to Norris Pyle,	10
Best stallion for light draught between 3 and 4 years to Ira E Welsh,	20
2d best to James Torrence,	10
Best heavy draught colt 2 years old to Robert Milligan,	10
2d best to John Hodgson,	5
Best quick draught colt 2 years old John Wylie,	10
2d best to Edward Mansfield,	5
Best quick draught mare 3 years old to Mr Updegraff,	20
2d best do to John Wylie,	10
Special premium for colt to A B McQuewan,	10
Best filley for heavy draught between 2 and 3 years to John Richard,	10
2d best to James Carothers,	5
Best filley for light draught between 2 and 3 years to George A Bayard,	10
2d best do Anderson Moyes,	5
Best yearling colt, heavy draught to Jas. Ewing,	10
2d best to William Watson,	5

Best yearling colt for light draught to E Murphey, 10
 2d best to James T Ladd, 5
 Special premium to Robert Patterson for a Canadian stallion, 15

Flour.

Best barrel flour to H B Haverstick, \$10
 2d do do W C Denny, 5
 3d do do L Wilmarth & Co., 3
 Best water and butter crackers to Rhodes & Verner,—Silver medal.
 2d best do do Davis & Sons,—diploma.
 Best smut machine Jacob Bermer, 10

Hay and Straw Cutter.

1st premium Dewitt & Co.,—Diploma. \$5
 2d do John S Shepler, do 3

Farm Wagons.

1st premium John Huey, \$10
 2d do William Wright, 5

Farm Dumping Wagon.

1st premium Thomas Castor, \$10

Corn Cultivators.

1st premium R Hall, \$5
 2d do Hall & Speer, 3

Harrows.

1st premium E R Shankland, 5
 2d do O A Wolf, 3

Grain Drill.

1st premium Lee, Pierce & Lee, diploma, \$15
 2d do Jacob Mumma, do 10
 3d do E C Marsh, do 5

Corn Drill.

1st premium James Charlton, diploma, \$5
 2d do J G McFarlane, do 3

Corn Stalk Cutters.

1st premium E R Shankland, \$5
 2d do Alrich, 3

Cob and Corn Crusher.

1st premium E R Shankland, \$10

Corn Shellers—Horse Power.

1st premium E R Shankland, \$10
 2d do P G Reading, 5

Corn Shellers—By Hand.

1st premium E R Shankland and to Dewitt & Co., who exhibited the same machine, a premium of \$5, to be divided between them each.
 2d premium J P Smith, \$3

Cultivators for General Purposes.

1st premium R Hall, \$10

Fanning Mills.

1st premium Jesse Roberts, \$10
 2d do E R Shankland, 5

Ox Yokes.

1st premium E P Sixes & Co., \$5
 2d do E R Shankland, 3

Clover Hullers.

1st premium A B Crawford, \$10
 2d do Brockvill, 5

Scrapers.

1st premium Hall & Speer, \$3
 Seed Planter by Hand.

1st premium E. R. Shankland, \$10
 12 do James Wardrope 5

Vegetable Productions.

Best 3 field pumpkins John Ewalt, 3
 2d do do Wm. Hemingrey, 2
 Best 12 ears yellow seed corn Isaac Newton, 3
 2nd do do Joseph Miller, 2
 Best 12 ears white corn Joseph Miller, 3
 2nd do do Wm. Martin Jr 2
 Best table potatoes Wm Martin Jr, 3
 2nd do do Robert McKnight, 2
 Choicest and largest assortment of table vegetables to Gerald Howett, 10
 1d do do David Holmes, 5
 Special premium for corn in the stalk D. E. Nevin 2
 Special premium to Adam Scott for cucumbers, 2
 Special premium to John Kelley for citron melons, 2
 Special premium to Geo S Negley for nasturtiums and peppers 2
 Special premium to Kennedy & Co for assortment of garden vegetables, 6
 Best bushel white wheat John Kilpatrick, 2
 2d do do Gidnal Wagner, 2
 Best Mediterranean wheat Martin Warfel, 3
 2d do do Wilson Lesnet, 2
 Best Etrurian wheat John Kilpatrick, 3
 Best oats to John Ross, 3
 Best barley to James Sampson, 3
 Best Irish potatoes Wm Martin Jr, 3
 Best sweet potatoes Alexander McKee, 3
 Best turnips David Holmes, 3
 Best sugar beets John Davis, 3
 Best mangel wurzel David Holmes, 3
 2d do do Gerald Howell, 2
 Best carrots David Holmes, 3
 2d do Wm Martin Jr, 2
 Best bushel parsnips David Holmes, 3
 Best bushel timothy seed Mr Job Hays, 3
 Best 12 stalks celery Geo McHattie, 3
 Best cauliflowers John McClusky, 3
 Best 12 carrots David Holmes, 3
 2d do Wm Martin Jr, 2
 Best 12 carrots D Holmes, 3
 2d do Wm Martin Jr, 2
 Best 12 parsnips G Howitt, 3
 2d do John Kelley, 2
 Best table turnips Jonathan F. Garrard, 3
 Best 12 beets George McHattie, 3
 Best 12 onions John Kelley, 3
 2d do George S. Negley, 2
 Best 6 cabbages Jas O H Denny, 3
 2d do John McClosky, 2
 Best 12 tomatoes Geo S Negley, 3
 2d do Edw Spence, 2
 Best egg plant Jas O Denny, 2
 2d do Lewis Peterson, 1
 Best 12 sweet potatoes Alexander McKee, 3
 2d do do Wm C Dunn, 3
 Best Lima beans Caleb Lee, 2
 2d do Geo S Negley, 2
 Best double parsley Robert McKnight, 2
 Best 3 garden squashes Jas O Denny, 3
 2d do do Jacob Mish, 2
 Best 3 large squashes Alexander McKee, 3
 2d do do Geo S Negley, 2
 Best 3 sweet pumpkins Daniel Dawson, 3
 2d do do Edw Spence, 2

Butter, Cheese, Honey and Salt.

Best lot of butter made from 5 cows in 30 consecutive days of 20 lbs first premium to Mrs Jonathan F. Garrard \$20
 2d best to Mrs John Simpson 10

Best embroidered silk work, Julia A Sandol	3
2nd do do Mrs M A Johnston,	2
Best counterpane, Mrs Blackburn,	3
Best ottoman cover, Mrs M E McKelvey,	3
2d do do Miss Nancy McCombs,	2
Best lamp stand mat do do	3
2d do do Amanda M Rogers,	2
Best artificial flowers, Mary McQuewan,	3
2d do do Mrs J B Hayden.	2
Best wax flowers to R S Vance,	3
2d do do Miss H Sanford,	2
Best home made bread Mrs Job Hayes,	5
2d do do Mary McQuewan,	3
Best pound cake to Mrs Job Hayes,	3
Best sponge cake to Mrs Job Hayes,	3
Best apple butter to Mary McElhenny,	3
2d do do Miss Beeler,	2
Best peach and quince butter to Miss J W Elliot,	3
2d do do Mary McElhenny,	2
Best fruit jelly to G G Negley,	3
2d do do Mrs Job Hays,	2
Best preserves to Eliza G Walker,	Silver cup
2d do do Mrs J F Garrard,	3
Best tomato preserves to Mrs H H Coit,	Silver cup
2d do do Mrs Mary Elliott,	3
Best tomato figs to H H Coit,	5
Best pickles to Mrs McGonigle,	3
2d do do A W Marks,	2
Special premium to Mrs Lange,	2
do do Miss M A Westervelt,	2
do do Mrs K Morgan,	2
do do Margaret Stewart,	2
do do Sarah A Ford,	2
do do E J Johnston,	2
do do Mrs M Borbridge,	2

Fruit.

1st premium for apples to R W Todd,	\$10
2nd do do Thomas Thornly,	5
1st premium for fall apples to W W Myers,	3
2d do do G H McIlvaine,	2
Special premium to Wm Martin jr,	3
do do to W & J Murdock,	2
1st premium for peaches to John L Snyder,	10
2d do do Robert W Todd,	5
Best pears to Thorn, Smith, Hanchett & Co,	Silver Medal.
2d best to Mr Spang,	3
Best quinces to David Beeler,	3
2d best to G W Negley,	2
Best grapes to H H Coit,	5
2d best to Wm Martin jr,	3
Best house grapes to Isaac Newton,	Silver Medal.
Best grape training to Wm Martin jr,	Diploma.
Best ladies' choice grapes to Thos White,	Diploma.
Best cranberries to John M Summy,	Diploma.
Best home made wine to Harmony Society,	3
2d best to H H Coit,	2
Best plums to John M Summy,	5
2d best to Frederick Pfifer,	3
Best watermelons to George McHatter,	3
2d best to W Martin jr,	2
Best specimen watermelon to Joseph Scott,	3
Best muskmelon to John Kelly,	3
Best sparkling Catawba to Nicholas Longworth,	Silver Medal.

Farm Implements.

1st premium to R H Hartley for double harness,	5
2d best to R & W Mackey,	3
1st premium to R H Hartley for single harness,	5
1st do R H Hartley for valises,	2
1st do R H Hartley for gent's traveling trunks,	2

1st premium R H Hartley for ladies' traveling trunks,	2
1st do R H Hartley for lady's saddle,	3
1st do R H Hartley for fire hose,	3
1st do G W Kerby for whips,	2
1st do R & W Mackey for gent's saddle,	3
1st do J F Garrard for churns,	3
2d do Samuel P Francisco for churns,	2
1st do M Heckley for cheese presses,	5
1st do Wm Rowan for grain cradles,	2
2d do James Nelson for do,	1
1st do Jordan Fritz for hand rakes,	3
2d do E R Shankland for hand rakes,	2
1st do Negley, Mohan & Co for hay forks,	3
2d do E R Shankland for hay forks,	3
1st do E R Shankland for grass scythes,	3
1st do E R Shankland for grain scythes,	3
1st do Wm Mann for cast steel chopping axes,	3
1st do Sheble & Lawson for manure forks,	3
2d do Negley, Mohan & Co do do	2
1st do Negley, Mohan & Co for spades,	3
1st do Negley, Mohan & Co for hoes,	2
1st do Robert Staley for horse shoes,	3
1st do H'ry Longkeep for grain meas'rs,	3
1st do J R & J T Holmes for broad axes,	3
1st do J R & J T Holmes for hand axes,	2
1st do J R & J T Holmes for hatchets,	2
1st do J R & J T Holmes for ship axes,	2
1st do Andrew Emma for vegetable fruit cutters,	3
1st do Thomas W Shaw for sickles,	3
1st do Postley Nelson for long-handled shovels,	3
1st do Postley Nelson for canal shovels,	3

Stoves.

Cooking stoves for coal—1st premium, Nicholson & Payne, silver medal; 2d premium, A. Bradley, \$5.
Cooking stoves for wood—1st premium, Nicholson & Payne, silver medal; 2d premium, A. Bradley, \$5.
Cooking ranges for families—1st premium, Nicholson & Payne, \$5.
Furnace for warming houses—1st premium, Arnold & Williams, silver medal.
Ornamental parlor stoves—1st premium, A. Bradley, silver medal; 2d premium, Nicholson & Payne, diploma.
Hall stoves—1st premium, M. Graff & Co., silver medal; 2d premium, Nicholson & Payne, diploma.
Hollow-ware—1st premium, M. Graff & Co., diploma.
Iron railing—1st premium, W. T. Blackford, (Gothic,) diploma; 2d premium, W. T. Blackford, (assortment,) \$5.
Italian and Grecian railing—1st premium, A. & W. T. McClurg, diploma.
Gothic posts for railing—1st premium, A. & W. T. McClurg \$2.

Discretionary Premiums.

Best sample grates and fenders, Nicholson & Payne, silver medal.
Best cooking stove, with revolving grate and back oven, McDonough & Stewart, diploma.
Best arrangement of stove for burning wood and coal, changeable at pleasure, J. & W. Thornley, diploma.
Best parlor cooking stove, Nicholson & Payne, diploma.
Best wrought iron cooking stove, for steamboats, M. M. Shirk & Co., diploma.

Best display of registers for ventilators and window air, Tuttle & Bailey, silver medal.

Best lot of cooking and parlor stoves, for finish and utility, Nicholson & Payne, diploma.

Best lot of turned cast iron railings, Jenks, Anderson & Co., diploma.

Best cupola fan, Jenks, Anderson & Co., silver medal.

Best sample self-heating smoothing irons, M. Graff & Co., diploma.

The Ploughing Match.

The ploughing match took place in a field about three miles from the city. The field was a very stiff sod, requiring strong horses, and many excellent ploughmen failed to take a prize, simply from the inefficiency of their teams. There were twenty competitors, and at about ten o'clock, all started off in gallant style.

The following are the awards of the Judges.

John M. Crum, Indiana township, Allegheny county, premium \$15, Hall & Speer's centre plough.

James Orlick, Shaler township, the 2d premium, \$10, Hall & Speer's centre plough.

Joseph M. Gregor, Cnartiers township, the 3d premium, \$8, R. Hall's clipper plough.

Jonathan F. Garrard, Indiana township, the 4th premium, \$5, Hall & Speer's centre plough.

Ploughboys.—John Agenew, Robinson township, the 5th premium, \$10.

P. S. Hall, Robinson township, the 2d premium, \$8.

Martin Clever, Ohio township, the 3d premium, \$5.

DISCRETIONARY PREMIUMS.—Newell French, sub-soil plough, from Ohio, a discretionary premium, \$15. Robert Clark, Manchester, \$5.

Wm. Stevenson, Manchester, hill-side plough, \$5.

Chester County Agricultural Exhibition.

This, the first in Chester county, after a suspension for eight or ten years, and the first in the series of county exhibitions to occur the present Fall in Pennsylvania, took place on the 16th and 17th ult. In respect to the amount of fine stock of all kinds, and other articles exhibited, no less than the general interest manifested by the very large attendance, it far surpassed what was expected. It was estimated eight to ten thousand persons visited West Chester on the occasion. The Horticultural Exhibition coming off at the same time, no doubt helped to swell the number.

A large number of full bred and grade Durham cows, heifers, and bulls were on the ground, as well as Devons, Holstein and Alderneys, and one fine Ayrshire bull, belonging to A. R. McIlvaine. Many of the Durhams exhibited were descended from the stock imported into this county some years ago, by Joseph Cope and Paschall Morris, and among the cows of this breed, as well as native stock, were some very extraordinary milkers. This being a dairy district, considerable attention has been paid to this particular, and those familiar with "Guenon's marks or choosing a Milch Cow," had here a fine opportu-

nity to test the truth of the system. The largest contributor in neat cattle, was A. Bolmar, of West Chester, who showed over thirty head of cows, heifers, and two magnificent Durham bulls, all of his own raising. These attracted great attention from their very fine size, combined with great neatness, and were highly creditable to his skill as a breeder, and to the general reputation of this district for superior stock. He, Paschall and John Worth, Gerard Cope, and George Brinton, Jr., were the chief contributors of Durham stock. The latter had a very fine young Durham bull, of great promise, whose portrait will appear in next number of Farm Journal. Richard Pim showed some fine Devons, which received the first premium, as they did in 1852, at the State fair at Lancaster. The fine Alderney Bull, figured in September number of Farm Journal, belonging to Marshall and Francis Strode, attracted much attention, and received the first premium. The display of horses, although not large, embraced some good animals, among which, the fine Norman draught horse of S. Holman, was conspicuous. In respect to sheep and swine, the exhibition surpassed either of our State fairs of 51 & 52, or any county exhibition which has yet been held in Pennsylvania. Chester county has long been celebrated above other portions of the State, in these particulars. It was the opinion of many attending from other counties, that, taking the whole stock of all kinds into view, the display at our late fair, has not yet been exceeded by those either of the State or any other county. In agricultural implements, vegetable productions, dairy products, seeds, grain, flour, honey, plants, &c., there was also a creditable display, though not as large as there should have been, or will be hereafter. Chester county, which has thus led off, may well say to her sister counties, go and do likewise. An effort will be made to purchase a suitable lot for future occasions, and erect permanent fixtures.

Exhibition of the York County Agricultural Society.

We have had no official information about this fair, which will probably be one of the best, in the State, and only within a day or two have observed a notice of it.

It is to be held on the 5th, 6th and 7th days of October. Passengers will be carried on the Baltimore & Susquehanna and Cumberland Valley railroads at half the usual rates, and articles for exhibition free of charge. In addition to fine stock, and other matter for which York county has been famous, it is understood there is also to be a grand display of fowls, one exhibitor, (Albertus Welsh,) of York, having 30 coops, some of the kinds not before exhibited, the Pearl Bantam Fowls, weighing thirteen ounces the pair. An address is to be delivered by the Hon. A. L. Hayes, of Lancaster.

Tioga County.

As noticed in our last number, the proposed meeting to form an Agricultural Society in this county, was duly held in the Court House, at Wellsborough, September 5th, and organized by calling George M'Leod, Esq., to the chair; a society was regularly formed, a constitution adopted, and officers appointed as follows:

President—Daniel L. Sherwood.

Vice Presidents—T. L. Baldwin, William B. Clymer, James Lowrey, Henry P. Vanness, Jas. Knox.
Rec. Sec'y.—F. E. Smith.

Cor. do. —James R. Wilson.

Treasurer—John T. Donaldson.

And 24 members of an Executive Committee. We are well acquainted in this border county, of Penn'a. and are surprised such a movement has not been made before. Her soil is not only productive for farming, but she is rich in mineral wealth, and contains in her Blossburg Basin, immense quantities of the finest Iron, coal, and potter's clay; a railroad connects these with the New York improvements. Being personally acquainted with the intelligent Corresponding Secretary, an officer on whom much of the efficiency of such societies depends, we shall expect a good deal from his well known energy and ability.

Susquehanna County Fair.

The Annual Exhibition and Cattle Show of the Susquehanna County Agricultural Society, will be held at Montrose, on the 13th inst. Ploughing match on the 12th.

This is one of the most spirited of our county Societies. The enterprise and skill of such men as Judge Jessup, Messrs. Walker, Drinker, Carmalt, Ward, Post, and many others, have given her quite a prominence through the State, and which the famous crop of corn, raised by our friend George Walker, has tended to increase. We observe also, both at the last and present State Fair, a premium for the best firkin butter has been awarded to Sarah M. Walker, of Woodbourne, in that county. We hope to be advised of what is going on there in agricultural matters.

Union County.

This is one of the finest agricultural counties in Pennsylvania, her fertile valleys being famous for wheat, which is the great staple. The excellence of her soil, early attracted the attention of many farmers from Chester county, who were among the original settlers, and afterwards of the Germans, who now form a considerable portion of the population.

We have been pleased to observe they have lately started an Agricultural Society, which goes into operation under the most favorable auspices, and will be highly useful. Through the attention of the Secretary, O. N. Worden, Esq., of Lewisburg, we

have received a copy of the constitution, which embraces in its object, improvement in Agriculture, Horticulture, and Domestic and Household Arts. Its officers are,

Jacob Grundy, President,

20 Vice Presidents,

Robert H. Lain, Treasurer,

Richard V. B. Lincoln, Cor. Secretary.

O. N. Worden, Rec. Secretary,

Samuel Weirich, Librarian,

James P. Ross, Isaac Slenber, H. U. Snyder,

Executive Committee,

as noticed in another column, the *first* fair is to be held at New Berlin, on the 13th and 14th of October. An address is to be delivered by David Taggart, Esq., of Northumberland, which we are confident will be a practical and creditable production.

Schuylkill County Exhibition.

The second annual exhibition of the Schuylkill County Agricultural Exhibition, will commence on the 18th inst., and continue three days. Articles for exhibition, consigned to J. J. Paxson, Schuylkill Haven depot, P. & R. R. R., will be forwarded to the show grounds, and the Society will be responsible for any damage that may happen them.

Berks County Agricultural Exhibition.

The second annual exhibition of the Berks county Agricultural Society, will be held in Reading, on Wednesday, Thursday, and Friday, the 12th, 13th, and 14th of October. The number of Premiums offered is quite large.

New Castle County, Delaware, Agricultural Society.

The annual exhibition and cattle show of this society, will take place on Wednesday, the 12th of October, the ploughing match on the following day. The address is to be delivered by C. P. Holcombe, who has just returned from Europe, and from his well known ability as well as the fund of information recently obtained during his travels abroad, a highly interesting discourse may be anticipated.

Farm Journal--Double Number for October,

As intimated some time ago, we issue a double number this month. We shall also issue double numbers in the two succeeding months, with the view to close the volume with the year, which will be more satisfactory to our subscribers, and convenient in some other respects.

We have delayed the present issue a few days, so as to furnish the reports of the State Exhibition at Pittsburg, and insert all which have reached us at this date, 6th inst.

State Poultry Exhibition.

We give below the premium list of this society for their first exhibition, which is to be held in Philadelphia, and will no doubt attract a large concourse of people, and be highly interesting. At a meeting of the society, held at the Art Union Rooms, on the 12th instant, James Andrews, Esq., of Darby, was unanimously elected President, in place of Col. John Price Wetherill, deceased, and Dr. William D. Brinkley was unanimously elected Vice President. These are excellent selections.

In reference to the prosperity of the society, and the approaching exhibition, F. G. Wolbert, one of the Executive Committee, writes us:—"Our society now numbers four hundred and six members, and our arrangements for the exhibition are nearly perfected. In addition to the show of Poultry, Pigeons and rare Birds, (which will eclipse any thing of the kind ever got up in this country,) there will be promenades concerts nightly in the upper saloon. Our esteemed member, C. W. Bender, tenders the use of his celebrated hatching machine, so that the curious may see hatching by artificial means. Several of our members are experienced in the art of caponizing, and will make experiments daily, so that those who desire may learn the science, We hope to have a visit from our friends during the exhibition."

List of Premiums

To be awarded at the first grand Exhibition of the State poultry Society of Pennsylvania, to be held at the Chinese Museum Building, Philadelphia, on the 22d, 23d, 24th and 25th of November next, 1853.

Object of the Society.—The promotion of the improved breeds of Poultry in the United States.

Class 1 The best pair of imported Fowls of each variety.

" 2	SHANGHAI, &c.	
No. 1 The best Pair of Buff Shanghae	Fowls	
" 2 do.	White do.	"
" 3 do.	Black do.	"
" 4 do.	Grey do. or Brahma	"
	Pootra,	"
Class 3 do.	Cochin China,	"
" 4 do.	Chittagong,	"
" 5 do.	Hoang Ho,	"
" 6 do.	Booby,	"
" 7 do.	Malay,	"
" 8 do.	Java,	"
" 9 do.	Dominique,	"
" 10 do.	Jersey Blue,	"
" 11 do.	Bucks County,	"
" 12 do.	Black Spanish,	"
" 13 do.	Dorking,	"
" 14 do.	Game,	"
" 15 do.	Poland,	"
" 16 do.	Native or Dung-Hill,	"
" 17 do.	Bolton Grey or Creole,	"
" 18 do.	Golden Pheasant,	"
" 19 do.	Silver do.	"
" 20 do.	Bantam,	"
" 21 do.	Silky,	"
" 22 do.	Negro,	"
" 23 do.	Frizzled,	"
" 24 do.	Capons,	"
" 25 do.	Guinea,	"

" 26	TURKEYS,	
No. 1 For best	Wild	Turkeys
" 2 do.	Domestic	"
Class 27	GEESSE.	
No. 1 For best pair	Wild	Geese.
" 2 do.	Domestic,	"
" 3 do.	Hong Kong,	"
" 4 do.	Bremen,	"
" 5 do.	Bernicle,	"
" 6 do.	Swan,	"
Class 28	DUCKS.	
No. 1 For best pair	Alesbury	Ducks.
" 2 do.	Common or Puddle	"
" 3 do.	Muscovy,	"
" 4 do.	Wild,	"
" 5 do.	Mule,	"
Class 29 For best display	Fancy Pigeons,	first premium
		\$5
	2d do.	do 2
Class 30 the best display	Canary Birds,	first premium,
		5
	2d do.	do. 2
For the best pair of Male and Female of each of the	above varieties of Fowls, over 1 year of age, first	premium,
		5
For the 2d best do.	do. 2d. premium,	3
For the best pair under one year of age, first pre-	mium,	4
	2d do.	do. 2d 2

Any fine specimen, where there is no competition, may receive an honorary premium, optional with the Executive Committee.

Persons who have raised the stock they exhibit, will have a decided preference over all others in competition; and any one desirous of exhibiting Poultry, can do so by becoming a member, and will address the Board of Managers box 784 Post Office, Philadelphia.

N. B.—The Society will furnish wire cages for the display of Poultry and Pigeons; any member, however, may exhibit in his own cages, provided they are of a suitable character.

JESSE M. WILLIAMS,
CHARLES K. ENGLE,
G. G. WOLBERT,
Executive Committee.

National Exhibition of Imported Blood and American Breeds of Horses.

We have received a circular and premium list of the above exhibition, which is to be held at Springfield, Mass., October 19, 20, 21, and 22. It has been gotten up under the auspices of the United States Agricultural Society, and is the first of the kind which has yet been held in this country. Arrangements have been made with several of the principal railroads, and others are in progress, by which any person who shall transport over any of said roads, and enter a horse for exhibition or premium, shall receive back the money paid as freight, upon presentation to the proper officers of said roads, of the Recording Secretary's certificate, that such horse or horses have been duly entered. Horses intended for exhibition and premium, or for sale, should be entered with the Recording Secretary, H. S. Noyes, on or before Saturday, Oct. 15th, 1853. A Board of

of Judges will be appointed from various parts of the Union, to examine all the horses entered, who will award premiums, to be paid or delivered at the close of the exhibition. Small entrance fees will be required. Persons wishing more information will address, post-paid, William Stowe, Corresponding Secretary, and general agent of the exhibition, Springfield, Mass.

The premium list is as follows:

LIST OF PREMIUMS.

STALLIONS.

For the best Stallion of 7 years and over,	
1st premium	\$200
2d do.	100
3d do.	50
4th do. a silver goblet valued at	25
For the best Stallion of 4 years and under 7,	
1st premium	\$100
2d do.	50
3d do. a silver goblet valued at	20

CELDINGS.

For the best gelding of 4 years and over,	
1st premium	\$100
2d do.	50
3d do.	25
4th do a silver goblet valued at	20

BREEDING MARES.

For the best Breeding Mare of 4 years and over,	
1st premium	\$100
2d do.	50
3d do.	25
4th do. a silver goblet valued at	20

BREEDING MARES WITH FOAL BY THEIR SIDE.

1st premium	\$50
2d do. a silver goblet valued at	25

MATCHED HORSES.

For the best span of Matched Horses of 4 years and over,	
1st premium	\$100
2d do.	50
3d do.	25
4th do. a silver goblet valued at	20

FANCY HORSES.

For the best span of Fancy Horses of 4 years and over,	
1st premium	\$100
2d do.	50
3d do. a silver goblet valued at	25

COLTS.

For the best Stallion of 3 years old,	
1st premium	\$50
2d do.	25
3d do. a silver goblet valued at	20
Best Filly	25
For the best Stallion of 1 year,	
1st premium	\$25
2d do. a silver goblet valued at	20
Best Filly,	20
For the best Stallion 1 year old,	
1st premium	\$25
2d do. silver goblet valued at	20
Best filly.	20

FARM OR DRAUGHT HORSES.

For the best pair of Farm or Draught Horses,	
1st premium	\$50
2d do.	25
3d do. a silver goblet valued at	20
Best single do.,	
1st premium	\$25
2d do. a silver goblet valued at	20

PONIES.

For the best pair of Ponies,	
1st premium	\$50
2d do.	25
3d do. a silver goblet valued at	20

In addition to the Premiums above stated, a liberal sum of money, with Medals and Diplomas, will be placed in the hands of the Committee on Premiums, to be distributed by them to such exhibitors as, in their discretion, they shall deem most deserving.

GEORGE DWIGHT, President.

JAS. M. THOMPSON, Vice President.

WILLIAM STOWE, Secretary.

It would appear, as if the premiums offered for stallions and mares, were to be confined to one class, nothing being said about road or draught.

For the Farm Journal.

George Walker's Premium Crop of Corn.

To the Editor of the Farm Journal.—As you have published some severe animadversions upon George Walker, for the statement of a corn crop raised by him last year, it is nothing more than justice to him, and is due to our Agricultural Society, as well as to the community at large, that they should hear both sides. I therefore enclose you a vindication of the parties concerned, from the pen of one of our most practical and safe farmers—a man who is not likely to be influenced by prejudice, interest or authority.

I will merely add that our society has, every year since its institution, awarded premiums for upwards of one hundred bushels of shelled corn per acre, and it is unreasonable to suppose when other instances are so frequent, of 150 and 160 bushels being raised, that our society has been either egregiously mistaken, or shamefully imposed upon.

We should wish you also to remember that the premium on corn, was not the only one awarded to us at the State Fair.

SUSQUEHANNA COUNTY.

Corn Crop.

DIMOCK, Sept. 10th, 1853.

H. H. FRAZIER, Esq.—Allow me, if you please, a small space in your valuable paper for a few statements as appendages to that of neighbor Walker's corn crop; for I have heard much said about his raising an incredible and unheard of large crop, as though such an amount never had been, or could be raised on an acre of ground. Now for the benefit of those who doubt Mr. Walker's raising that amount, (and have rather impugned the decision of the judg-

es,) I will relate that which now stands on historic record. A few years ago, Amasa Turner and Seth Jefferson, of Mantua, Ohio, measured the shelled corn raised on an acre belonging to Seth Harmon, Esq., and found it to be 108 bushels and 21 quarts—in 1835 Mr. Ashael Renwick of Pickway co., Ohio, raised 5600 bushels on 40 acres, being 140 bushels to the acre. In the same state, John Loughry, of Adams co., raised 1500 bushels of shelled corn on eleven acres, being over 136 bushels per acre. In our state, Joshua Evans, raised in Washington co., 580 bushels on five acres, being 116 bushels per acre; Mr. Paschall Morris, near West Chester, Chester co., in 1845, raised 101 bushels and 3 pecks per acre for 10 acres. In Dunham, Conn., in 1844 Mr. Wadsworth raised a crop of shelled corn on $\frac{1}{4}$ of an acre, at the rate of 151 bushels and 18 qts. per acre. In New York State, Mr. J. P. Jones, of Sullivan co., in 1849, raised over 195 bushels of ears per acre; William H. Crawford, same co., in the same year, raised 100 $\frac{1}{2}$ bushels shelled corn per acre; Mr. Stevens of Hoboken raised over 118 bushels per acre; in Champaign co., in 1831, Mr. B. Butler, raised 140 bushels from one acre; in 1840, W. Ingals of Oswego co., raised 154 bushels on an acre; B. Bradley, Bloomfield co., in 1841, raised 232 bushels, on 2 acres; in 1842, Cayuga co., Mr. Samuel Phelps raised 122 bushels on one acre; in the same year Wilcox, of Saratoga, raised 132 bushels of shelled corn per acre; Mr. James Burroughs of Chataque co., in 1846, obtained a premium for a crop of 114 bushels and 32 lbs. of shelled corn per acre. The Messrs. Pratts of Easton, in 1822, obtained from 3 acres, a crop of 517 $\frac{1}{2}$ bushels of shelled corn, a little over 172 bushels per acre; and the next year they raised from 4 acres, 680 bushels or 170 bushels per acre; Mr. Wilmarth of Taunton, (Mass.) in 1825 raised 142 bushels on an acre; and in the same state, Leonard Hill, Esq., of Plymouth, in 1823 raised 139 bushels of shelled corn per acre, for which he received the premium. In New Hampshire, Mr. R. Lamprey, of Moultonborough, in 1839, raised 131 bushels on an acre; and the same year, same state, P. P. Pillsbury of Tufton borough, raised 130 bushels on one acre. In Bourbon co., Kentucky, Mr. George W. Williams, in 1840, raised 159 2-9 bushels per acre; and Mr. Young of the same state in the same year, raised over 190 bushels per acre; and J. Myers, Esq., of Canton, Ohio, raised 1352 bushels of corn on seven acres, being a little over 193 bushels per acre.

If you think the above worthy a place in the columns of your paper, you are at liberty to insert it; if not, reject it.

Yours,

F. M. BABCOCK.

In addition to the above, we find it stated in the "Genesee Farmer," for the present month, that six different counties in Ohio awarded premiums on twenty-five acres of corn last year, whose average product was 127 bushels per acre. The largest yield was in Stark county, two acres producing 326 bushels, or 163 per acre.—*Susquehanna Register*.

Strawberry Question.

Our present number contains a long article on this vexed question, almost sufficient of itself to form a treatise. Having promised the author space for another hearing, we could not well decline publishing it, which we should have done had we been apprised of its great length.

The importance of the subject to practical farmers will not warrant the use of so much space, particu-

larly as it has now been narrowed down to a mere abstract point. It seems to be admitted all around, that a bed of pistillate varieties will not produce a full crop without the presence of staminate. This is not the question at issue, but whether, *under any circumstances*, a pistillate plant will vary its prevailing characteristics, be *liable* to become staminate or perfect, and *produce fruit*. On the one side it is contended this is *impossible*, and as *unnatural* as for a cow to turn into a bull, the pistillate or other peculiarity being the *fixed law* of its nature—its true *normal condition*. By fruit, in this connection, we understand to be meant what is usually called the fruit of the strawberry, (the receptacle containing the seed,) and not the seed itself, which is the real fruit. Leaving the fact, or otherwise, of this in the case of the strawberry, analogy would seem to settle it as neither impossible or improbable. The Maclura, a dioecious plant, produces the osage orange apple, or receptacle containing imperfect seed, many miles away from any staminate influence, and as Dame Nature is usually a consistent old lady, what she does once she may do again.

Neither will it be denied that the strawberry plant, in its normal condition, has perfect flowers, and there are *very many* analogous cases, of plants under a *change* of circumstances, reverting back to, or varying from their original character. This is no new fact in vegetable Physiology.

But when the very foremost champion of the fixed sexuality of the strawberry plant, voluntarily comes forward over his own signature, and gives up the *whole case*, and of his own accord knocks away every prop of the platform on which he and his friends have been contending, there is surely no use in further discussion in the Farm Journal or any where else.

N. Longworth, in a late number of the Western Horticultural Review, concludes an article as follows: "A: Longworth's Prolific (which is hermaphrodite) produces a chance pistillate blossom, I see no reason for saying that there may not be a pistillate bearing an occasional hermaphrodite or staminate blossom." This admission covers the whole ground, and is exactly what T. Meehan has been assailed for asserting. One remark further, in conclusion, which simple justice to him seems to require. It is insinuated, and indeed directly asserted, that he had seen the article by W. D. before penning his own, and had copied the ideas from it. On the contrary, being accidentally on a visit to West Chester, he informed us that he had forwarded his article to the Horticulturist, and this was before the issue of the number of the Farm Journal containing W. D.'s essay. That their views should have been identical, is no more strange than that the views of scientific men should happen to agree on a scientific question when they are 2000 miles apart, and had never met.

Sale of Earl Dacie's Stock.

Although matter has accumulated on hand just previous to closing our edition, particularly in relation to the State Fair, we cannot refrain from gratifying the anxiety of many of our readers, in relation to this great sale of stock, which exceeds all hitherto known in England. It will be observed that some of the best, and indeed the highest priced animals are coming to America. Duchess 64, a red cow four years old, being purchased by J. Thorne of New York, for 600 guineas; a roan heifer three years old, Duchess 66, for 700 guineas, for Messrs. Morris & Becar, of New York, for whom also it was understood the best bull, "Duke of Gloster," was knocked off for 650 guineas to Mr. Tanqueray, who is to use him one year before delivering him up. We annex the catalogue of sale, below, with the single remark that these remarkable prices are considered in England no mere fictitious valuations, but bona fide and intrinsic evidences of the skill, science and success with which the late Earl had bred his herd, and which was thus appreciated by the most intelligent breeders in England present at the sale. Every one interested in stock will be anxious to hear of their safe arrival in the United States.

COWS AND HEIFERS.

THE FIGURES REFER TO COATES'S HERD BOOK.

Lot 1. "Bessy," roan, calved January 11, 1840; got by Helicon, 2107, dam Beeswing, by Sir Thomas, 2636. Hon Mr. MORTON, 40 guineas.

Lot 2. "Stella," roan, calved April 13, 1841; got by Rockingham, 2550, dam Starville, by Young Seagull, 5100. Mr. NIBBET, 35 guineas.

Lot 3. "Challenge," red and white, calved March 4, 1843; got by Morpeth, 7254, dam Cleopatra, by Helicon, 2107. Mr. NIBBET, 44 guineas.

Lot 4. "Duchess 55th," red, calved October 31, 1844; got by Fourth Duke of Northumberland, 3649, dam Duchess 38th, by Norfolk, 2377. Mr. TANQUERAY, 50 guineas.

Lot 5. "Victoria," roan, calved April 20, 1845; got by Second Duke of York, 5959, dam Rachel, by Sir Thomas, 7516. Mr. ALLEN, 44 guineas.

Lot 6. "Princess Fairfax," roan, calved October 3, 1845; got by Lord Adolphus Fairfax, 4249, dam Princess Royal, by Thick Hook, 6601. Mr. GRENFIELD, 77 guineas.

Lot 7. "Nonsuch," white, calved November 1, 1845; got by Duke of Cornwall, 5947, dam Nina, by Velocipede, 5552. LORD BURLINGTON, 50 guineas.

Lot 8. "Chaff" red and white, calved February 14, 1846; got by Duke of Cornwall, 594g, dam Challenge, by Morpeth, 7254. Colonel KINGSCOTE, 42 guineas.

Lot 9. "Minstrel," red roan, calved March 14, 1846; got by Count Conrad, 3510, dam Magie, by Wallace, 5586. Mr. TANQUERAY, 100 guineas.

Lot 10. "Oxford 6th," red, calved November 6, 1846; got by Second Duke of Northumberland, 3646, dam Oxford 2d, by Short Tail, 2621. Mr. TANQUERAY, 205 guineas.

Lot 11. "Duchess 59th," roan, calved November 21, 1847; got by Second Duke of Oxford, 9046, dam

Duchess 56th, by Second Duke of Northumberland, 3646. Mr. JONATHAN THORNE, 350 guineas.

Lot 12. "Mantilla," red and white, calved November 22, 1847; got by Cramer, 6907, dam Minerva, by Helicon, 2107. Mr. FOLGAUBE, 110 guineas.

Lot 13. "Virginia," white, calved February 6, 1848; got by Petrarch, 7329, dam Victoria, by Second Duke of York, 5959. Mr. HALL, 75 guineas.

Lot 14. "Pomp," white, calved April 3, 1848; got by Duke of Cornwall, 5947, dam Princess Royal, by Thick Hook, 6601. Mr. GRENFIELD, 65 guineas.

Lot 15. "Louisa," roan, calved July 12, 1848; got by Cramer, 6907, dam Lady Bird, by Cato, 6836. Mr. LANGSTON, 78 guineas.

Lot 16. "Beatrice," red, calved August 1, 1848; got by Cramer, 6907, dam Bessy, by Helicon, 2107. Mr. GRENFIELD, 87 guineas.

Lot 17. "Chaplet," roan, calved April 6, 1849; got by Usurer, 9763, dam Chaff, by Duke of Cornwall, 5947. Mr. LANGSTON, 54 guineas.

Lot 18. "Victorine," red and white, calved July 4, 1849; got by Usurer, 9763, dam Victoria, by Second Duke of York, 5959. Mr. GRENFIELD, 46 guineas.

Lot 19. "Horatia," red, calved July 27, 1849; got by Usurer, 9763, dam Fair Helen, by Petrarch, 7329. ———, 30 guineas.

Lot 20. "Duchess 64th," red, calved August 10, 1849; got by Second Duke of Oxford, 9046, dam Duchess 55th, by Fourth Duke of Northumberland, 3649. Mr. JONATHAN THORNE, 600 guineas.

Lot 21. "Oxford 11th," red roan, calved August 25, 1849; got by Fourth Duke of York, 10167, dam Oxford 6th, by Second Duke of Northumberland, 3646. Mr. TANQUERAY, 250 guineas.

Lot 22. "Florence," roan, calved October 12, 1849; got by Usurer, 9763, dam Florentia, by Zenith, 5703. Mr. ROBINSON, 62 guineas.

Lot 23. "Fatima," red and white, calved November 27, 1849; got by Victor, 8739, dam Fenella, by Humler, 7102. Mr. CARR, 70 guineas.

Lot 24. "Mystery," red, calved May 24, 1850; got by Usurer, 9763, dam Minstrel, by Count Conrad, 3510. Mr. TANQUERAY, 200 guineas.

Lot 25. "Boddice," red, calved June 29, 1850; got by Usurer, 9763, dam Bessy, by Helicon, 2107. Mr. JONAS WEBB, 115 guineas.

Lot 26. "Flourish," white, calved October 21, 1850; got by Usurer, 9763, dam Florentia, by Zenith, 5702. Mr. RICH, 71 guineas.

Lot 27. "Duchess 66th," rich roan, calved October 25, 1850; got by Fourth Duke of York, 10167, dam Duchess 55th, by Fourth Duke of Northumberland, 3649. Messrs. MORRIS & BECAR, 700 guineas.

Lot 28. "Victory," white, calved November 25, 1850; got by Usurer, 9763, dam Victoria, by Second Duke of York, 5959. Mr. BRAITHWAITE, 80 guineas.

Lot 29. "Chintz," roan, calved January 24, 1851; got by Usurer, 9763, dam Chaff, by Duke of Cornwall, 5947. Mr. GRENFIELD, 70 guineas.

Lot 30. "Finance," roan, calved April 20, 1851; got by Usurer, 9763, dam Fudge, by Buchan Hero, 3238. Mr. CRAWBY, 90 guineas.

Lot 31. "China," roan, calved December 25, 1851;

got by Fourth duke of York, 10167, dam Chaff, by Duke of Cornwall, 5947.

Lord FEVERSHAM, 90 guineas.

Lot 32. "Bodkin," red and white, calved February 12, 1852; got by Fourth Duke of York, 10167, dam Beatrice, by Cramer, 6907.

Mr. ROBINSON, 56 guineas.

Lot 33. "Lucy," white, calved March 19, 1852, got by Usurer, 9763, dam Louisa, by Cramer, 6907.

Mr. HALL, 40 guineas.

Lot 34. "Hornet," roan, calved April 16, 1852; got by Contract, 10071, dam Horatia, by Usurer, 9763.

Lord HOWE, 43 guineas.

Lot 35. "Duchess 67th," white, calved May 16, 1852; got by Usurer, 9763, dam Duchess 59th, by Second Duke of Oxford, 9046.

Mr. GUNTER, 350 guineas.

Lot 36. "Parliament," roan, calved June 5, 1852, got by Fourth Duke of York, 10167, dam Pomp, by Duke of Cornwall, 5947.

—, 56 guineas.

Lot 37. "Oxford 15th," red, calved June 12, 1852; got by Fourth Duke of York, 10167, dam Oxford 6th, by Second Duke of Northumberland, 3646.

Lord BURLINGTON, 200 guineas.

Lot 38. "Bibby," white, calved August 21, 1852; got by Fourth Duke of York, 10167, dam Bessy, by Helion, 2107.

—, 51 guineas.

Lot 39. "Pride," roan, calved September 6, 1852; got by Fourth Duke of York, 10167, dam Princess Fairfax, by Lord A. Fairfax, 4249.

Mr. GREENFIELD, 165 guineas.

Lot 40. "Duchess 68th," red, calved September 13, 1852; got by Duke of Gloster, 11382, dam Duchess 64th, by Second Duke of Oxford, 9046.

Mr. JONATHAN THORNE, 300 guineas.

Lot 41. "Chance," red and white, calved January 6, 1853; got by Duke of Gloster, 11382, dam Chaplet, by Usurer, 9763.

Mr. ROBINSON, 56 guineas.

Lot 42. "Violet," red, calved February 26, 1853; got by Fourth Duke of York, 10167, dam Victoria, by Second Duke of York, 5959.

Mr. BATHROP, 48 guineas.

Lot 43. "Snowdrop," white, calved February 26, 1853; got by Fourth Duke of York, 10167, dam Science, by Sir Thomas Fairfax, 5196.

Lord SPENCER, 120 guineas.

Lot 44. "Duchess 69th," white, calved March 19, 1853; got by Fourth Duke of York, 10167, dam Duchess 59th, by Second Duke of Oxford, 9046.

Mr. TANQUERAY, 400 guineas.

Lot 45. "Lizzy," red and white, calved April 29, 1853; got by Fourth Duke of York, 10167, dam Louisa, by Cramer, 6907.

Mr. GREENFIELD, 81 guineas.

Lot 46. "Oxford 16th," red roan, calved May 17, 1853; got by Fourth Duke of York, 10167, dam Oxford 6th, by Second Duke of Northumberland, 3646.

Mr. TANQUERAY, 180 guineas.

Lot 47. "Duchess 70th," red and white, calved July 8, 1853; got by Duke of Gloster, 11382, dam Duchess 66th, by Fourth Duke of York, 10167.

Mr. GUNTER, 310 guineas.

BULLS.

Lot 1. "Duke of Gloster," 11382, red, calved September 14, 1850; got by Grand Duke, 10284, dam Duchess 59th, by Second Duke of Oxford, 9046.

Mr. TANQUERAY, 650 guineas.

Lot 2. "Fourth Duke of York," 18167, roan, calved December 22, 1856; got by Second Duke of Oxford, 9046, dam Duchess 51st, by Cleveland Lad, 3407.

Mr. R. BELL, 500 guineas.

Lot 3. "Cornwall," white, calved May 30, 1852; got by Contract, 10071, dam Nonsuch, by Duke of Cornwall, 5947.

Mr. MACE, 61 guineas.

Lot 4. "Uncle Tom," white, calved June 15, 1852; got by Fourth Duke of York, 10167, dam Ursula, by Usurer, 9763.

Mr. SAUNDERS, 37 guineas.

Lot 5. "Vampire," roan, calved July 18, 1852; got by Fourth Duke of York, 10167, dam Victorine, by Usurer, 9763.

—, 120 guineas.

Lot 6. "Franklin," red, calved October 20, 1852; got by Fourth Duke of York, 10167, dam Fatima, by Victor, 8739.

—, 80 guineas.

Lot 7. "Cheltenham, red and white, calved December 18, 1852; got by Duke of Gloster, 11382, dam Chaff, by Duke of Cornwall, 5947.

Mr. HILTON, 125 guineas.

Lot 8. "Florian," white, calved December 28, 1852; got by Fourth Duke of York, 10167, dam Florentia, by Zenith, 5702.

—, 58 guineas.

Lot 9. "Fifth Duke of Oxford," red, calved March 6, 1853; got by Duke of Gloster, 11382, dam Oxford 11th, by Fourth Duke of York, 10167.

Lord FEVERSHAM, 300 guineas.

Lot 10. "Gloucester," red and white, calved April 3, 1853; got by Duke of Gloster, 11382, dam Beatrice, by Cramer, 6907.

Lord FEVERSHAM, 120 guineas.

Lot 11. "Francisco," roan, calved April 30, 1853; got by Fourth Duke of York, 10167, dam Florence, by Usurer, 9763.

MARQUIS OF EXETER, 150 guineas.

Lot 12. "Norman," white, calved May 8, 1853; got by Fourth Duke of York, 19167, dam Nonsuch by Duke of Cornwall, 5947.

Mr. ROBINSON, 100 guineas.

Lot 13. "Marquis," red and white, calved June 14, 1853; got by Duke of Gloster, 11382, dam Mantilla, by Cramer, 6907.

—, 75 guineas.

For the Farm Journal.

Making and Saving Manure,

By J. S. HOUGHTON, M. D., PHILADELPHIA.

To the Editor of the Farm Journal:—

DEAR SIR:—After all that has been written, said and published, on the subject of Making and Saving Manure, it is painful to see what utter neglect prevails among people who ought to know better, of the very first principles of this art. A short time ago, I travelled through several counties in the interior of Pennsylvania, and observed, almost everywhere, the fine barns of the farmers perched upon a side-hill, and the barn-yard drained into some neighboring stream. A week or two since, I visited a fine Seed Garden and Horticultural establishment, near Dunkirk, New York, and there saw several large manure heaps, so located as to form a large duck-pond of black, ammoniacal liquor, in cavities of the ground near them, containing, I suppose, several hundred barrels of liquid manure, worth at least two cents per pint. The manure heaps,

from which this fluid had drained, were, at the same time, so dried up and heated, for want of moisture, that they were upon the inside, burnt to a white powder, or *ashes*. The ammonia, and even the organic matter, had been evaporated or consumed in the intense combustion that had taken place, and all for want of the very drainage in which the ducks were fishing for worms.

Now if farmers will practice no other book-farming, it seems to me that they cannot be afraid to adopt a few simple and reasonable rules for the proper preservation of manure, and the increase of the heap, to say nothing of making manure by artificial means. With this view, I will note down a few plain directions for saving manure.

1st.—Never let manure be spread over a large surface of ground, unless it be covered with clay, or muck. It is much better to scrape up the contents of the barn-yard, frequently, and put the manure in to a heap, than to let it lie spread out, and exposed to sun, air, rain, and wind. If the yard is small, and a deep layer of muck, clay or coarse material be thrown in, for the cattle to walk over, and to absorb liquids, it may answer; but even then, unless the whole yard be covered by a shed, it would be better to throw the manure into a pile.

2nd.—When stable manure is placed in a heap, to remain any great length of time, there should always be layers of clay, or old black loam, or charcoal, placed between layers of manure, to keep the manure from heating too much, and to absorb the gases generated by the infallible decomposition, or rotting that must ensue. The top of the heap should also be covered with loam or clay.

3rd.—The manure heap should be kept constantly moist, or wet, at all seasons, but never so wet as to show drainage; or if it should drain, the fluids which pass off should be caught in a hoghead or cistern, and thrown back upon the heap. A cistern and chain pump, placed near the heap, upon the lowest hole, will enable the farmer to pump back the drainage as fast as it appears.

4th.—The manure heap should be covered, so as not to be affected by sun, wind or rain. If too dry, water should be added to it.

5th.—If the heap heats too much, or smokes, and shows that ammonia is evaporating, throw upon the heap a barrel of water, into which you have put one quart of oil of vitrol. This will check the too rapid decomposition, reduce the heat, and prevent the escape of ammonia. The vitrol is worth its cost, as a manure, independent of any other effect.

6th.—If the heap does not heat sufficiently, and much of the material is coarse, and requires rotting to make it fit for use, (especially in cold weather) make several holes in the heap, with a stake, and pour in some hot lye, or hot potash water, (strong)

and you will soon have a fine heat. You will not be likely to use too much.

7th. If your manure smokes when you are moving it, you may stop the smoke, and prevent the loss of much valuable material (ammonia or hartshorn,) by wetting the heap with oil of vitriol and water, say one quart to a barrel of water. Or, you may turn the heap a few days before using it, and sprinkle in a quantity of Plaster of Paris, which is Sulphate of Lime, or Oil of Vitrol and Lime.

8th. Green weeds, &c., are best rotted in a compost heap, with clay or loam, instead of in the hog pen. Much valuable material is lost by exposing green vegetable matter in an open hog pen. If you add one bushel of salt to every four horse loads of weeds, you will kill the seeds, and prevent the manure from making the land foul. The salt should be added *after* the weeds are well rotted, not when they are first put into the heap.

This much for making and saving manure by plain and simple means, adapted to the use of plain farmers. In another article I may present some methods of making manures of coarse and cheap materials, by artificial means, which are considered by scientific farmers worth knowing. I made eight hundred horse loads last year, on a very barren farm, in New Jersey, where probably not more than fifty loads had ever been made before. I kept only two horses in my stable, and four cows which were not tied up, because there were no accommodations for them.

Philadelphia, Sept. 17, 1853.

Right Education of Horses.

That Horses may be educated will not appear strange to those who have closely observed the intelligence often manifested by that noble animal.

The present remarks are designed to give some information in relation to the rearing and treatment of young horses, not so much, however, with reference to their food and drink, as to their quietness and docility.

That there is a difference in the temper and disposition of different horses, is not denied; but at the same time it is averred that where a horse is so vicious or unmanageable as to render him unsafe in the harness, it is chargeable in *almost every instance* to the treatment he has formerly received.

Training of colts should commence when they are about three months old, so as to have them become familiar with the family before they are taken from the dam. Some colts are inclined to use their heels rather too freely; in such cases great care is necessary. They should be approached carefully, and caressed and curried, and they will soon submit to have their feet taken up and handled without resistance; and this will aid in quieting them while being shod, as the horse seldom forgets what he has once learned.

A common method of weaning colts is to take them to some back lot, and place a heavy yoke or "poke" on the neck, which they are compelled to wear for several weeks until their spirits are completely broken, and become more or less 'ewe-necked', from which defect they rarely recover. Another

method, but little less objectionable, is to shut them in the stable; but this does not learn them to *respect a fence* in the least. Now the better way, and the one that the writer has practiced with uniform success, is the following:—Prepare a yard, (if it contains an acre or more, so much the better,) having a strong high fence, so high that the colt cannot possibly leap over it—from six to seven feet will be sufficient—and let the materials of which the fence is composed be the same as those enclosing the field where the colt is in future to be kept—either wall, boards, or rails, as the case may be—and place him there without any artificial appendage whatever, and let him understand that *it is the fence alone that prevents his escape*. He should be generously fed, and also have a shed to which he can retire at pleasure. After he has been subdued in this way, he may be turned into any field *having a fence of the same kind*, and of ordinary height, and he will not attempt to break over. Even the most spirited horse brought up in this way cannot be induced to leap a fence four and a half feet high.

The practical benefits of the above plan are great. In passing through the country, one is pained to see so many noble looking horses shackled and hampered in every conceivable way that ingenuity can invent, much to their detriment in putting on flesh, to say nothing of the perplexity and trouble to the owner in adjusting the trappings every time the beast is turned out or taken up, and all for the want of a little care during the first year,—for it is eminently true in this case that an ounce of prevention is worth a pound of cure.

There are many horses not “true,” or reliable, in the harness, having the habit to stop or walk, especially at the foot of a hill; this is caused by having been at some time overloaded, and perhaps unmercifully beaten. Neighbor A. has a beautiful span of bays three years old, that he has been breaking in the past winter; he wishes to haul some rails from the farther side of the farm, and as the colts have become tolerably “handy,” he puts on nearly a full load, which they manage very well until they come to a “hard spot,” and there they stop. The driver looks at the load, then looks at the horses: they are nearly as large as the old team,—he *knows* they can draw it, and is determined they *shall*. So he commences beating and pounding the poor animals until he is nearly worried out, when he throws off his load and goes home with loss of both time and temper, and the horses damaged to the amount of twenty-five dollars each.

Now it is quite probable that they had *strength* enough to draw the load in question, but they had not sufficient practice; they did not know how to apply their strength, and did not work in concert. They should have been made to draw only light loads for a long time, and then by increasing the weight gradually, as their strength and experience increases, they can be made to do all the work they are capable of doing, and will always work kindly, and may be depended on under all circumstances.—*The Wool Grower and Stock Register*.

Potomac Marble in Berks County.

One of our friends recently picked up, along the turnpike, a few miles south-east of Reading, a specimen of marble, there called the ‘all sorts,’ and burnt as limestone, for agricultural purposes. He has had it polished in West Chester, which it takes beautifully, and would make an elegant article for mantel pieces,

and other ornamental uses, columns, &c. It is evidently the same as the Potomac marble, or calcareous conglomerate rock, of which the columns are made in the Hall of the House of Representatives at Washington. As it appears to be abundant in that vicinity, we rather wonder it is not more used for ornamental purposes.

Work for the Month.

VEGETABLE GARDEN:—Towards the latter part of the month, cabbage, cauliflower and lettuce sown last month may be transplanted into frames, to be kept through the winter, for which purpose procure boards about one foot wide, of the requisite length to hold the desired number of plants and to suit the sash, and arrange them in any sheltered situation. They should be nailed to short posts at the four corners, and be one foot high at the back, and about six inches in front. Shutters or straw mats should be provided to guard against extreme cold. Bank up the earth on the outside of the frame. Plants kept in this way should have air through the winter on all fine days, so as to harden them by exposure. If kept too warm they will continue growing and become tender. Continue earthing up celery on fine and dry days. Thin out growing crops of spinach and kale. Clean and dress beds of aromatic herbs by cutting out decayed stems, and digging between such as will admit of it. If the ground is poor, top dress with rotten manure. Onions, if not already planted, should be set out to make offsets for early spring use. Seed of rhubarb may now be sown. Dig up horseradish for use as wanted. Collect pumpkins and winter squashes. Take up potatoes and stow away in bins in cellar. Collect all cabbage stumps and other refuse stuff from ground now vacant, and haul to pig pens or compost heap. If the soil is at all stiff, it should be dug or ploughed up deeply before the approach of winter.

FLOWER GARDEN.—All plants that are tenacious of frost should be attended to the early part of this month, and get ready for winter quarters; all plants intended to flower in the window should be potted immediately and placed in a close frame and shaded from the sun, for a short time, to take fresh root. When they have become established give air freely. Sow flower seeds on a south border the early part of this month, to remain out over winter. The following are suitable for that purpose:—Candytuft in variety; Clarkias do., Gillies do., dwarf German Larkspur, Erysimum Perofskianum, Escholzia Californica, Coreopsis Bicolor. When hard weather sets in, these should be covered with dry leaves or long litter. Tulips, Hyacinths, &c., should be planted now to ensure success in blooming. The soil must be rich. If the soil in the bed is naturally poor, it will be best to take it out and fill in with good soil to the depth of a foot. Plant the bulbs in rows nine inches wide,

four inches apart in the rows, and from three to four in depth. It makes a very pretty bed if crocuses and snow drops are planted around the bed, next to the edging, hyacinths next, and tulips in the centre. On the approach of hard weather the bed should be covered with several inches of leaves. Mow grass plats. After they are cleared they would be much improved by being well rolled; treated in this way they would look well the remainder of the season.

FARM.—Rye should be sown in this month, so as to become well established before Winter. Potato ground should be cleared as early as practicable, for this crop or late wheat. An after top dressing of short manure or super phosphate of lime may be applied, to avoid the delay of hauling manure from the barn yard. Use plenty of grass seed, not less than five quarts of timothy, to be followed by clover in the spring. In husking corn, select the largest and best ears for seed, and particularly where there are two on a stalk. Continued care in this respect for a few years will be well repaid. Corn for seed should be laid away on a shelf by itself, or suspended by the husks from the rafters, secure from mice.

Corn in the crib is apt to heat if either husked too soon, before being well cured in the shock, or not properly culled. The sound corn should first be gathered from the heaps, and the cullings afterwards placed by themselves for fall feeding to the stock. The economy of feeding all the nubbins or unripe corn to the fattening hogs is rather dubious, where the object is to prepare them early for the butcher. Sound corn, in the ear, previously subjected to the boiling or steeping process, in a farmer's portable boiler, would be found more profitable. Every farmer should have one of these about his premises, which can be set wherever most convenient, and should be used for corn, small potatoes, beets, &c. The real value of these for stock is only developed by boiling, and at this season of the year, when refuse vegetables are so abundant, the expense would be twice paid before Christmas. The profit of cooked over uncooked food is no longer an open question.

If there is leisure, plough up, this fall, corn ground for next season. Sink the plough up to the beam, and follow with the sub-soil. A cheap way to get a new farm every year is to plough a little deeper. On many farms the sub-soil has not been disturbed for a century, and when turned up to the meliorating influence of the atmosphere, will be found often to be abounding in inorganic or mineral wealth, and capable of assimilation by the growing crops. The earth taken out from the bottom of a deep well and spread on the surface, is an illustration of the immense loss from shallow ploughing. Every farmer, almost, has observed the benefit of such an application.

Horses and oxen are generally in better order for hard work now, than in the spring.

At leisure times collect leaves, soil from headlands,

coarse grass, &c., and place convenient to barn yards for use during winter.

LIST OF PATENT CLAIMS

Issued from the United States Patent Office.

CROW KILLERS.—By N. J. Tilghman, of Salisbury, Md.—I claim the combination of the dart, helical spring, sliding rest, or head, attached to the triggers and the dog, with the hollow post in which it is placed.

PROCESS OF FLOURING.—Re-issue.—By D. P. Bonnell, of Tecumseh, Michigan.—Patented originally Aug. 14, 1849.—I claim the process of grinding the offal of grain, immediately after it has passed from the bolts, contemporaneous with the first flouring; and by the continuous operation of the machinery adapted to said process, as set forth, for the purpose of increasing the quantity and improving the quality of the superfine, or other flour.

MEAT TENDERERS.—By Wm. Beach, of Philadelphia, Pa.—I claim forming a meat maul for the purpose designed, by securing to one end of an oblong handle a series of rows of tapered teeth of the form described, cast on a plate or driven singly into the wood, as may be desired.

MACHINES FOR PREPARING SPOKE TIMBER.—By A. W. Graheart, of Beallsville, Ohio.—I claim the arrangement of the adjustable bed, the bridle or clamp, the sliding guide or gauge, and foot lever, for the purpose set forth.

DRAUGHT APPARATUS OF SEED PLANTERS.—By Jacob Mamma, of Mt. Joy, Pa.—I claim the combination of a tongue, having motion vertically and laterally, with the directing and supporting wheel, as set forth.

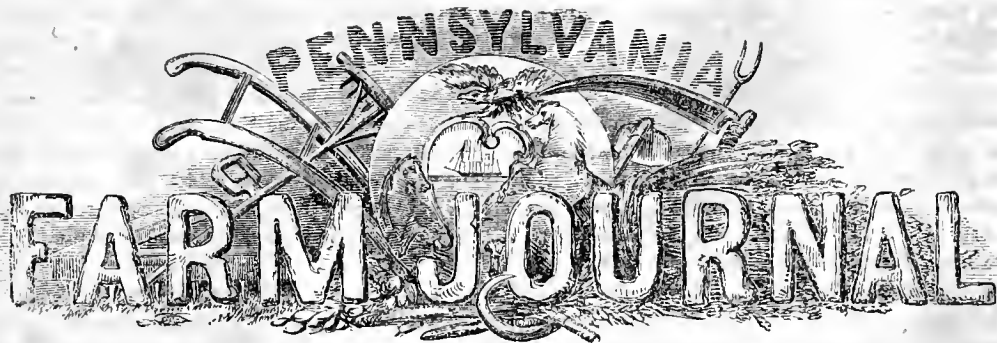
HILL-SIDE PLOWS.—By W. H. Babbit, of Waynesburgh, Pa.—I claim constructing and arranging head in the hinge which connects the beam of the plow with the upright, so as to lock said hinge by means of a bolt before the pivot of said hinge, and by a lever behind said pivot, for the purposes of making the bearings in said hinge adjustable, as set forth.

SEED PLANTERS.—By G. W. Brown, of Tylerville, Ill. Ante-dated Feb. 2, 1853. I claim, first, the oscillating horizontal wheels, or distributors, in the bottom of the hoppers, having slots and holes of various sizes, in combination with the stationary caps and pins for the discharge of different kinds and quantities of seeds, as set forth.

Second, I also claim the arrangement of the covering rollers, mounted as described, and performing the purpose of covering the seed, elevating the cutters, in turning round, and also in adjusting them to different depths, as set forth.

CORN SNELLERS.—By E. L. Mills of Rochester Depot, Ohio.—I claim reducing the larger ears of corn to be shelled to a nearly uniform size with the smaller ones, by passing the whole through between a toothed cylinder and concave, where the large ears are caught and partially reduced or operated upon preparatory to their passing with the smaller ones through between a second cylinder and concave, when the entire operation of shelling and separating takes place, as described.

WINNERS.—By L. S. Ingraham, of Cuyahoga Falls, Ohio.—I claim the stair or fluted screen, constructed as set forth.



PENNSYLVANIA THE FARM JOURNAL

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THE FARM JOURNAL.

J. L. DARLINGTON, EDITOR.

A. M. SPANGLER, ASSISTANT EDITOR.

To the Patrons of the Farm Journal.

The increase in the circulation of the Farm Journal, and in the duties of its business department since the removal of its publication to West Chester, have been such as to require the unremitting attention and supervision of one person—a desideratum which could not have been attained under the late arrangement. To effect this, one of the late firm—J. M. Meredith—purchased the respective shares of Messrs. Bowen and Spangler in the establishment, and will hereafter give his time and attention exclusively to the business department of the Journal. Discarding visionary theories, and relying upon the test of practical experience, the publishers desire to make it truly the FARM JOURNAL, where every farmer in the latitude of its usefulness may note whatever is superior in his mode of culture, management of stock, and other matters appertaining to the successful prosecution of the business of an American Agriculturist. No pains or expense will be spared to make this work fully equal to any other published in the country. The delays occasionally inseparable from the publication under the former proprietors, it is believed will not hereafter occur. As an evidence of this we may state that, owing to the waiting for the reports of the State Fair, and to sickness and death in the office where the Journal was recently published, the present double number was not commenced until about the middle of October, yet we hope it will reach our readers in due season.

The title of the firm has been changed from Bowen, Meredith & Co., to J. M. Meredith & Co., to whom all business communications should be addressed.

J. L. Darlington, Esq., continues at the head of

the editorial department. All communications relating thereto should be addressed to him, or to "The Editor of the Farm Journal."

J. M. MEREDITH & CO.

Pulverization of the Soil.

We knew of no department of Farm tillage of so much importance and so much neglected, as complete and thorough pulverization. The theory of its action is so manifest and the benefit in various ways so striking, that the indifference of farmers in respect to it, can only be attributed to the force of habit. We are very apt to follow what we have been used to, but our own experience and perhaps that of every observing farmer, has been that neither the harrow, nor roller although repeatedly passed over a field, can reduce the soil to that friable and porous condition which is desirable. The relative fertility of a soil depends much on its absorbent power and this again on the minute division of its parts. When it is considered that the organic food of plants constituting over 90 per cent, is derived chiefly from the atmosphere, the loss from any defective cultivation, which would shut off or interfere with free access to this great source of supply, will be readily perceived. Ammonia and nitric acid those great fertilizers, nature has abundantly provided, which are disengaged by atmospheric electricity, and carried down with rain, watery vapor always existing in the driest weather, carbonic acid ever present in the atmosphere from which the whole of the carbon in plants is primarily derived, and when deprived of which they die; oxygen the great agent of decomposition, and necessary to the germination of all seeds, are great sources of nutrition, available only to a limited extent, unless the particles of soil are in a state of fine comminution, so as to admit of their free access. Jethro Tull, in his theory that the sole difference in soils, was owing to the fine division of particles, probably went too far, but its great importance was not generally appreciated in his day, neither is it at present. He reduced his views so far to practice, as to raise twelve

successive crops of wheat from the same land, simply by the free use of the plough and cultivator. Where the soil is finely divided in addition to its increased absorbent power, the roots of plants ramify and distribute themselves more thoroughly, and are brought into more direct contact with the nutritive particles of soil. Vegetable decomposition is promoted, and the hard lumps containing little reservoirs of food otherwise entirely unavailable, are made to open out their locked up supplies. The great aim should be to bring the roots into contact with as many points of nutrition as possible. Where the ground is left lumpy, it is the same thing as cutting off the needed supplies of food. The tender fibres of plants are entirely unable to penetrate hard clods. It is also well known that finely pulverized soils, suffer much less from drought than others, because they are more permeable to atmospheric influences, and are able to absorb more moisture. Whatever evaporation may take place from the surface during the day time, is more than counteracted by increased absorption of the inner and exterior portions during the night. The reason that garden culture is more productive than the field, is not entirely owing to the extra coat of manure, but to the *thorough* manner in which the soil is *dug, broken up and finely divided*. Although the disuse of the plough, may seem like a relic of barbarism, there are portions of Europe, and of Great Britain where spade culture, even on a large scale is considered more profitable, solely from the finer division and more complete disintegration of the particles of soil. The nearer farming can approximate to gardening the better and more perfect the system. Among our Farm implements, something is greatly wanted to bring about that fine pulverization, which cannot be effectually done with the roller. For want of anything better, we have used with the greatest advantage particularly on a few acres of ground devoted to vegetables, a mere platform made of boards 7 or 8 feet long, nailed to cross strips, so as to be about five feet wide. To this at one end, we have attached a forked chain, for the horses to draw by. If found not heavy enough with standing on it, it may be loaded with stones. This thoroughly breaks up the lumps, and makes the whole fine and mellow. Professor Wilkinson late of Mount Airy, in a recent letter to us, describes an implement he has used, with great advantage, which he says "costs but a tithe of what a roller does and is worth a dozen of them." To give a better idea of it we have had an engraving made of a drawing he sent us, something like the following



It is made by taking 2 pieces of 3-4 oak joice, 4 feet

long, to them nail on like clap boards, strips of 1½ inch hard oak plank 6 inches wide, and drag it by a chain attached to the front corners. If, the land is wet, (which it ought not to be when this is used,) so as to clog the machine it must be turned over and kept clean with the hoe. Add to other advantages of fine pulverization we have mentioned, the increased destruction of weeds, which thus have no places of harbor, left them, and we hope farmers will be induced to give the subject more attention.

Norway Maple.

We somewhat wonder that the above beautiful tree *Acer Platanoides* is not more generally known and planted. We think it the most desirable of the maple family, and is better adapted on several accounts for street planting than any other. It does not grow so tall as to be objectionable, but makes a very dense compact head, fully equal to the Horse Chestnut. The leaves are of a dark shining green, perhaps a little larger than the *A. Pseudoplatanus*, or sycamore, and although, all the other species of maple are more or less subject to attacks of caterpillars and insects, we have never yet observed anything of the kind on the Norway maple. This may be owing to the presence of a sharp milky juice, peculiar to this species, and which is offensive to them. It may be observed exuding at the base of the Petiole, when broken off. There are two or three trees planted along the streets of West Chester, and several very fine ones about 15 to 20 feet high at the Westtown Boarding School, 3 miles distant. They are model trees, and look as if with their dense foliage they would almost turn a shower of rain like an umbrella.

We are not certain but that the norway maple is rather a slow grower. It certainly is so when small and disposed to head low; after it gets up, however, we have seen a growth of two or three feet in one season. It deserves to be extensively planted.

It is native of Europe in woods, particularly Germany and Switzerland, seed ripens in October. Botanical character, leaves cordate, smooth 5 lobed; lobes acuminate, with a few coarse acute teeth, corymbs stalked, erectish and smooth with divaricated wings.

Tulip Poplar.—*Liriodendron Tulipifera*, is another of our very beautiful, shade trees, well adapted for street or lawn, which is comparatively lost sight of, for no other reason, than that it is so common. In England, 3000 miles away from its native habitat it is properly appreciated, and highly valued. The Germans also make much use of it for avenues. It is rather more difficult to transplant than other trees, owing to a deficiency of fibrous root. The nurserymen who obtains his stock from the woods, even when small will probably lose 50 to 75 per cent. But after having been thus transplanted, and a growth of fibre induced by cutting off the main roots, the Tulip

Poplar may afterwards be moved with comparative safety, provided they are not too large. When once established they grow rapidly. So magnificent a tree is the admiration of all foreigners, and with its gorgeous blossoms, erect and stately habit, broad and lively foliage, well deserves a little extra pains and risk to obtain. Were it only an exotic it would be more valued and more frequently planted.

Inferior Guano and Artificial Manures--Analyses.

The present scarcity of Peruvian Guano in our markets has induced a great demand for other fertilizers, and to supply this demand many articles for the improvement of the soil are daily advertised and sold at a price very far above their real value. We have had Mexican, African and Patagonian guano going off at a cost which can never repay those who bought them; "Biphosphates," "Improved Phosphates," and various other compounds offered for sale at prices very nearly double their value. For the information of the agricultural community, I here state the comparative value of these different manures, from samples which were sent me, with the calculation of their value.

For the Patagonian guano, I take its average composition in former years. The analyses which have been sent to our markets, with these manures and guanos, are *totally unworthy of credit* and should not be relied on. There may be, and doubtless are correct analyses of the samples examined by the gentlemen whose names are signed to them, but they certainly do not represent the articles offered for sale here. In the following table the value of the ammonia (in manures which contain it) is estimated by its cost in good Peruvian guano, and the phosphates of lime by its cost in bone dust. These are taken as a standard, because of their being better and more universally known than other articles. The calculation of positive value is, therefore, very nearly correct, and for comparison precisely so. Thus, if a ton of bones be worth \$20, then Mexican guano is worth \$21 20. Superphosphate (which is bones dissolved in oil of vitriol) \$26 80, without the labor necessary to mix the materials, which is about \$6; mineral phosphate of lime, \$2. 40; and in the same way with other manures whose chief value consists in bone phosphate of lime.

TABLE.

	Mexican Guano average of three samples.	Spanish Main Guano.	Patagonian Guano average.	Super phosphate, from New York.	Mineral phosphate of Lime.
Pure bone phosphate of lime.	53	54	37	36 4	55
Organic matter, and Ammonia.	6	0 4	5 19	5	—
Other earthy matters.	0 4	0 4	2 5	18 6	—
Water.	11 6	12 6	17 5	17	41
Sulphuric acid of 66 degrees.	29	27	24	23	—
Value of 2,000 pounds,	\$21 20	\$21 60	\$19 30	\$26 80	\$22 40
			Labor, 6 00		
			\$32 80		

As a substitute for Peruvian Guano, of which there will be a very insufficient supply, I would recommend, where the analyses which I have made and published in my reports show a deficiency of phosphoric acid, or on soils where bone dust or Mexican guano has proved useful, the following mixture:

Mineral phosphate of lime 500 lbs., or ten bushels of bone dust (finely ground) to the acre—to be ploughed or harrowed in with wheat in the fall.

And in the spring the following top dressing: Nitrate of soda 50 lbs. per acre; common salt one to two bushels per acre.

These should be well pulverized, finely mixed, divided into three equal parts, and sown broadcast on the wheat in the spring at three dressings; the first of which should be applied about the first of March, or as soon as the wheat commences to grow after the cold weather of winter; the second ten or fifteen days afterwards, and the third portion at about the same interval.

This top dressing has been very fully tested on wheat and grass in England and Scotland, and pays there, as stated in reports from the highest authority, more than one hundred per cent. on the outlay. It makes a clean, strong, bright straw, increases the weight, and adds greatly to the product of the grain. I hope our farmers will use it on a small scale at least, and test the success of its application in this country, and I request all who do use it to furnish me with the result. JAMES HIGGINS, M. D.,

Maryland State Agricultural Chemist.

To Soften Putty.

As it is often difficult for the Gardener in repairing his sash, to take out the old putty, it will be well to remember, that a rag dipped in a solution of strong caustic potash or soda, and applied by laying on a few hours previously, will soften it and make the removal comparatively easy.

TO CURE WOUNDS IN FRUIT TREES.—The following directions were published by William Forsyth, King's Gardener in England, many years ago, and have often been found valuable:

"Take one bushel of fresh cow dung, and a half a bushel of lime rubbish from an old building, that from the ceiling of rooms is preferable, half a bushel of wood ashes, and two quarts of fine sand. The last three articles to be sifted fine, and then mixed with the first, working them together until the mixture is very smooth and soft, like plaster.

The tree is to be prepared by carefully removing all decayed or injured portions, down to the sound, fresh wood, leaving the surface smooth, and rounding off the edge of the bark very smooth. After this the above plaster is to be spread very carefully and smoothly over the cut surface and somewhat beyond. The plaster should be from an eighth to half an inch thick, and smoothly and thinly finished off at the edges. After the plaster has been spread, it should be dusted over with a mixture of four parts of dry ashes, to one part of fine sand once in twenty or thirty minutes, until the moisture is all absorbed, and there is a smooth dry surface.

THE WAY TO PULL TURNIPS.—The Yankee grasps the root by the top and pulls it with his hand, and then cuts off the tops with a knife. The Englishman has a better way. He sharpens his hoe, and passing along, cuts with a single stroke, the tops of the turnip; then with the same implement strikes under it so as to cut off the roots, and brings it out of the earth. In cutting off the tops he guides his hoe so as to throw them into a sort of row, in one place, and in digging he guides it so as to throw the roots together in another row. He will dig the roots about four times as fast as one Yankee with his pulling and knife.—[Maine Farmer.

Pruning and Management of Fruit Trees.

It seems almost incredible the ignorance prevailing among intelligent persons on the above subject: we mean not only farmers, but citizens who have room in their city gardens for a few trees, as well as those having a few acres out of town, and who *might* keep themselves amply provided through the season, with a *succession* of the most luscious fruits, pears, plums, (barri'g the curculio,) cherries, apples, peaches, &c. It would surprise many how *little* attention is necessary, provided it is given *seasonably*, and with *judgment*. The merchant engaged in the city during the day, and who drives or rides on the railroad in the afternoon to his pleasant suburban residence, could find no more agreeable and useful employment, than half an hour or an hour's attention in this way daily. Here a too luxuriant branch requires shortening, a terminal bud pinched off, a useless shoot removed. There, the bark indicates sluggish action, and should be softened and cleaned, by the wash for this purpose. One tree has the grass growing too close around it, and which should be dug under. Another has a superabundance of fruit which requires thinning. Mulching around all of them must be applied, &c. To do all this does not require so much *time* as *taste* for such pursuits in the first place, and then a little knowledge and skill. One of our friends, a very intelligent merchant in Philadelphia, but who spends the Summer at his country seat, was complaining to us lately of his peach trees, that they would not bear, were in fine healthy condition, growing most luxuriantly, and making vigorous shoots every season, but still there was no *fruit*. His *theory* was, that the tree exhausted itself, by such great efforts at *growing*, and had not strength *left* to produce fruit, and he was accordingly about to dig in around the trees, a copious supply of stable manure, to recruit these exhausted energies. Here was a case of what might be called, false reasoning from facts. The trees did not bear fruit, because their strength was given to make growth of wood. Check this by the shortening in process, or by root pruning impede the circulation of sap and you develop fruit buds, and have fruit. Our friend's plan was to promote still further the luxuriant growth, increase the very cause of failure. The trees don't bear because they grow so fast. We will give them manure, and make them grow faster, and then we shall have peaches. We mention this as a case in point, and there are hundreds of others like it. We have often urged in our Journal, that Fruit Culture is a *business* in itself, and like all others, requires to be *understood* before success should be expected. It is both a science and a art. We must not cram a tree down into a small hole, and expect dame nature will supply us with juicy Bartletts, and other fruits, without our giving her any further thought or assistance. No; she stands upon her reserved "rights," and won't be

slighted. We must study the habits of trees, the laws of vegetable growth, the subject of specific manures, and then we shall have the reward of our labour, with all that additional zest which accompanies intelligent effort. Our tables will then be supplied, both in quantity and quality, with just such fruit, each in its season as our imaginations only have hitherto been *feasting* upon.

We extract below a most excellent chapter on the principles and practice of pruning, from P. Barry's Fruit Book, the best work we think on the rearing and management of fruit trees, yet published in this country. Every owner of a spot of ground large enough for a few fruit trees, should have a copy. It may be obtained at the Agricultural Warehouse in this borough. Price, \$1 25.

PRUNING—ITS PRINCIPLES AND PRACTICE.

This is one of the most important operations connected with the management of trees. From the removal of the seedling plant from the seed bed, through all its successive stages of growth and maturity, pruning, to some extent, and for some purpose, is necessary. It may, therefore, be reasonably presumed, that no one is capable of managing trees successfully, and especially those conducted under certain forms, more or less opposed to nature, without knowing well *how to prune, what to prune, and when to prune*. This knowledge can only be acquired by a careful study of the structure of trees, because the pruning applied to a tree must (aside from the general principles on which all pruning depends) be adapted to its particular habits of growth and mode of bearing its fruit. It is in view of this fact that the chapter on the structure and mode of formation of the different parts of fruit trees has been given in the first part of this treatise, that it may form the basis of this branch of culture.

The idea that our bright American sun and clear atmosphere renders pruning an almost unnecessary operation, has not only been inculcated by horticultural writers, but has been acted upon in practice to such an extent that more than three-fourths of all the bearing fruit trees in the country, at this moment, are either lean, misshaped skeletons, or the heads are perfect masses of wood, unable to yield more than one bushel of fruit in ten, well matured, colored, and ripened.

This is actually the case even in what may be called, in comparison, well managed orchards. Look at the difference between the fruits produced on young and old trees.

The former are open, the fruits are exposed to the sun, and, therefore, they are large and perfect, their skins smooth and brilliant, as though they were painted and polished. This ought to teach us something about pruning; but this is only one point. We prune one portion of a tree to reduce its vigor, and to favor the growth of another and weaker part. We prune a stem, a branch, or a shoot to produce ramifications of these parts, and thus change or modify the form of the whole tree. We prune to induce fruitfulness, and to diminish it. We prune in the growing as well as in the dormant season; and finally, we prune both roots and branches. Thus we see that pruning is applied to all parts of the tree, at all seasons, and to produce the most opposite results.

It appears necessary to treat of pruning under each of these circumstances separately.

1st. *Pruning to Direct the Growth from one part of a tree to another.*—The first period in the existence and growth of a tree in which this becomes necessary, is in the nursery. Those who have had any experience in tree culture, have observed that young trees in nursery rows have a tendency to increase in diameter. In certain cases, this want of proportion becomes so great, that the tree bends under its own weight; and hence, it is necessary to resort to some method of propping it up. This condition is attributable to several causes. First, the absence of a sufficient amount of air and light around the stem, to enable the leaves on it to fulfill their functions properly. It has been shown that the formation of new wood depends upon the elaborating process carried on in the leaves, and that this process can be maintained only in a free exposure to the sun and air. This being the case, it is obvious that any part of the tree excluded from the action of these agents, cannot keep pace in growth with other parts to which they have full access. In nursery rows, as trees are usually planted, the stems, after the first year's growth, are to a great extent, excluded from the light, consequently the buds and leaves on them cannot perform their parts in the creation of new wood. The top of the tree, however, is fully exposed, and, consequently, it makes a rapid growth towards the free air and light. When this is continued for two or three years in succession, the tree becomes top-heavy; the quantity of woody fibre at the top is as great as, and it may be greater than, at the bottom; and hence it bends under its own weight.

2d. *The Tendency of the Sap to the Growing Points at the Top of the Tree.*—Growth is always the most active and vigorous, when trees are in a natural condition, at the newly-formed parts. The young buds are the most excitable, and the more direct their communication with the roots, the more rapid will be their growth. Hence it is that a yearling tree furnished with fifteen to twenty buds or more, from its base to its top, frequently produces a shoot from its terminal bud only, and seldom more than three or four shoots from the whole number of buds, and these at the top. This natural tendency, and the exclusion of light from the stems of nursery trees, by their closeness to one another, are the chief causes of weak and crooked trees, to counteract which we resort to pruning.

In "heading down" a young tree, we cut away one-third or one-half of the stem, and this removes the actively growing parts; the sap must then find new channels. Its whole force is directed to the buds that were before dormant, they are excited into growth, and produce new wood and leaves; these send down new layers of woody fibre on the old stem, and it increases rapidly in diameter, so that by the time it has attained its former height, the base is two or three times as thick as the top, and possesses sufficient strength to maintain an erect position.

Maintaining an equal growth among the branches of a tree, is conducted on the same principle. Branches that are more favorably placed than others, appropriate more than their due proportion of the sap, and grow too vigorously, are checked, by removing more or less of their growing points; this lessens the flow of sap to that point, and it naturally takes its course to the growing parts of the weaker branches that were left entire, and thus a balance is restored.

Pruning to Renew the Growth of Stunted Trees.—It frequently happens that trees, from certain causes,

become stunted, and almost cease to grow; the sap vessels become contracted, and every part assumes a comparatively dormant condition. In such cases they are cut back, the number of their buds and leaves is reduced, the whole force of the sap is made to act upon the small number remaining, and enables them to produce vigorous young shoots; these send down new woody matter to the stem, new roots are also formed, and thus the whole tree is renewed and invigorated.

Pruning to Induce Fruitfulness.—This is conducted on the principle that whatever is favorable to rapid, vigorous growth, is unfavorable to the immediate production of fruit. Hence the object in view must be to check growth and impede the circulation of the sap, just the opposite of pruning to renew growth. The only period at which this pruning can be performed, is after vegetation has commenced. If a tree is severely pruned immediately after it has put forth its leaves, it receives such a check as to be unable to produce a vigorous growth the same season: the sap is impeded in its circulation, and the result is that a large number of shoots that would have made vigorous wood branches, had they not been checked, assume the character of fruit spurs and branches. *Pinching* is the principal mode of pruning to promote fruitfulness, and will be explained hereafter. It depends upon the above principle, of impeding the circulation of the sap and checking growth.

Pruning to diminish fruitfulness, is conducted on the same principle as that to renew growth, for this, in fact, is the object.

Pruning the Roots.—This is practised as well to promote fruitfulness, as to lessen the dimensions of trees. The roots, as has been shown, are the organs that absorb from the ground the principal food of the tree, and in proportion to their number, size, and activity, other things being equal, are the vigor and growth of the stem and branches. Hence when a tree is deprived of a certain portion of its roots, its supply of food from the soil is lessened, growth is checked, the sap moves slowly in its channels, is better elaborated in the leaves, and the young branches and buds begin to assume a fruitful character.

Roots are also pruned to prevent them from penetrating too deeply into the earth, and induce the formation of lateral roots near the surface, similar to the cutting back of a stem to produce lateral branches; the principle is the same.

Pruning at the time of Transplanting.—This is performed, not only to remove bruised and broken roots and branches; but to restore the tree to a proper balance. As trees are ordinarily taken from the ground; the roots are bruised; broke nor mutilated, to a greater or less extent. This obviously destroys the natural balance or proportion that existed between the roots and stem, and in such a condition the tree is unable to grow. The demand upon the roots must therefore be lessened, by reducing the stem and branches in length or number, or both; and the more the roots have suffered, the greater must be the reduction of the stem and branches, to bring them to a corresponding condition.

PEARS.—Why don't all the farmers raise pears?—Good pears bring a higher price in this market than any other fruit. Choice Bartlett's have been sold here at 12½ cents each, and a few of another kind at 18½ cents each. At such prices whoever could raise a crop of them would make his fortune speedily.—[N. Y. Jour. Com.

Madder and Indigo.

I have noticed that you have endeavored to direct the attention of our cultivators to the raising of madder and of indigo.

MADDER, to afford a beautiful and permanent tint, must be raised in a soil containing a large portion of calcareous earth, the more the better. The Dutch madder does not afford so beautiful a color, nor is it as permanent as that raised at Avignon, in France. The soil on which the latter grows contains fifty-six per cent. of fine limestone, the former not more than ten per cent. Madder raised in the non-calcareous soil of Alsace, gives a color of no permanency or beauty; but when raised in soil containing more than ninety per cent. of lime earth, the roots give faster and more beautiful dyes than that of Avignon.

The natural soils of Kentucky and Illinois would produce madder of very superior quality. About the year 1817, when in Kentucky, I used some madder raised in their gardens, and it proved to be of excellent quality. It requires three years to bring madder to perfection, and I am afraid this will prevent our cultivators from growing it, as few of them would be willing to wait that time for returns. They might, however, plant beds every year, and after the first three years have annual crops.

Madder is raised in narrow beds, about four feet wide, for the convenience of keeping it free of weeds—an operation necessary to the perfection of the roots. In Kentucky they let the shoots grow to about one foot high, when they lay them down and cover them with soil, and these form new roots. This may be repeated two or three times in their summer season. Those laid down the first year make good roots for consumption when dug at the end of the third season. They leave a good space between each bed to afford soil for covering the shoots. At the final digging, roots of the size of a goose quill are laid by for grinding, and the smaller ones are transplanted.

To prepare madder for market, it is necessary to stove-dry the roots and grind them, and these operations require considerable outlay, and experienced operators. In grinding, the outside cuticle is first taken off, and this forms what is known in the market as "mall-madder," which is only used in dyeing blacks, bottle-greens, and dark browns. The next layer taken off is known as "gamene," and is used for a great variety of common colors. The third is known as "ombre," and the fourth as "crop" or "grape." Either of the last may be used for red dyes; but the "crop" give the most beautiful color.

Madder roots are imported from Smyrna to England, called Palestine madder, which are ground in London.

There are two colors extracted from madder, when boiled, a red and a dingy yellow; but when the red alone is required the liquor must be kept below a boiling heat.

INDIGO.—Indigo is an annual crop; it is cut when at maturity, placed in a steeper, then covered with soft water, and stones placed on the plant to keep it under the water. It remains steeping until the liquor becomes of a greenish yellow, with a copper colored scum round the outside. The liquor is then drawn into a receiver, and the workmen beat it with long poles to oxidize the green fœcula, which will then precipitate as blue indigo.

About the latter end of the year 1799, or the beginning of 1800, I owned a large dyeing establishment in the west of England, consuming about our hundred pounds of indigo per week. At the date

above mentioned I went to London to lay in a stock for the blue vats; among the lots offered were two chests made in South Carolina, on the Pedee river, by the late General Wade Hampton. On examining them I found it of a deep rich copper color, clean and smooth in the fracture, and as it was offered at one shilling per pound cheaper than Bengal of a similar quality, I bought them with several of the latter; and as I expected, the quantity of coloring matter extracted from the South Carolina, was greater by at least ten per cent. than from the Bengal.

I emigrated to this country in the year 1808, and the following year I wrote to Gen. Wade Hampton to know if he continued to make indigo and to inform him of the superiority of the two chests I had used. In his answer he informed me that he had given up the making of indigo, because cotton planting paid better, and that indigo making so injured the health of his slaves that some of them never recovered their previous strength. The injury he complained of is produced during the beating process; for so rapid is the absorption of oxygen gas from the atmosphere, during the operation, that those who stand over it must be breathing an air with its vital principle so diminished as to render it unfit to sustain animal life. This difficulty might be easily obviated by letting the liquor from the steep into the receiver, shorter and narrower than the lower one, with a eulender bottom made of zinc, and through it dripping into the lower one called the beater. It would require three or four feet between the two. I believe, by this process, the green fœcula would be more completely oxidized, and a better quality of indigo produced than by beating.

Those who prefer the old process could restore the strength of their slaves by the following simple operation:—let them procure a twelve gallon graded gasometer, and convey into it for every three gallons of atmospheric air, one gallon of oxygen gas; by breathing this increased vital fluid a few times, the whole of the carbon that had increased in the blood from breathing a non-vital gas, would pass off, and strength be restored.—[Scientific American.

WM. PARTRIDGE.

Binghamton, N. Y., 1853.

AN IMMENSE PEACH ORCHARD.—A gentleman named Davis, residing in Clermont county, Ohio, has a peach orchard of 100 acres, containing 17,000 trees. Mr. Davis, it appears, left Philadelphia a few years ago and purchased his present farm—then considered the poorest one in the neighborhood—and set it out with peach trees of twenty different varieties from New Jersey. As the farmers in that vicinity had tried for several years previous to raise peaches for market, and had uniformly failed they considered the experiment of Mr. Davis a foolish one, and even went so far as to appoint a committee to wait on him and advise him to abandon it as it would certainly ruin him. He persevered, however, notwithstanding 5,000 of the trees died soon after being planted.—This was six years ago. In 1850 he gathered his first crop, from which he realized sufficient to pay for his farm and trees, and to leave him \$500 on hand. This season about 5,000 of the trees are bearing, and already 7,500 baskets have been sold at over \$1 per basket. His net profits this season are estimated at \$25,000.

It is said in the Ohio Cultivator that a bucket or two of water given to a horse to drink just before riding him, takes from him all disposition for capering, and renders him perfectly sedate.

Curled Leaf in the Peach.

This disease, if so we may call it, has been, for four or five years past, assuming a more and more serious aspect, so that cultivators around us here in Western N. Y., begin to say that if it goes on as it threatens to do, and no remedy be discovered, we shall soon be compelled to abandon peach culture entirely. This would certainly be great calamity, and it becomes every one who wishes to escape, to investigate carefully the nature of the disease, with a view to the discovery of the real cause. We have been looking anxiously for some new light on the subject among the journals of the day, and find the following in a recent number of the *Country Gentleman*.

"The curl in the leaf of the peach, which is generally supposed to have had a very unfavorable influence on the young crop, has given rise to much speculation as to its immediate cause, and cold weather, aphides, fungus, or mildew, and diseased sap, have been variously assigned as reasons. The cold weather theory will not always apply, as the disease sometimes appears after a continued succession of warm days, and the first opening of the young leaves shows the symptoms when ever they have been exposed to a cool night. Again, the disease has often made its appearance when no aphides could at any time be detected with the most powerful achromatic glass; and newly opening leaves, exposed only a few hours to the fresh air, and on which no insect had ever set foot, have shown incipient, but unmistakable indications. The explanation by 'diseased sap,' is too general and indefinite—the fungus theory has more appearance of plausibility, but needs investigation and proof—and if correct, the fungus must be of *internal* growth, as the smooth and shining epidermis of the leaf is quite unbroken when the curl first appears in the cellular tissue.

But whatever may be the cause, the best remedy, so far as discovered, is vigorous growth. We have observed trees standing in the corner of a hog yard, where they were copiously supplied with manure, and as a consequence making a rapid growth, covered with a deep green foliage, with scarcely a vestige of the curl; and a row of peach trees which had been very freely shortened in the past winter, by cutting off branches in some cases an inch in diameter, have sent out strong new shoots, almost wholly free from the disease, and the trees are well loaded with young fruit."

Now, our opinion, formed several years ago, and strengthened by later experience, is that the curl is produced by changes of temperature too great for the delicate constitution of the peach. It is a tree that vegetates early, and being usually and from necessity planted in a light soil, its earliness is hastened, and the sap gets into active circulation, and young leaves are put forth long before the weather in our northern climate becomes steadily warm. We all know how common it is to have warm genial spring weather about the opening of the buds, when a sudden change comes, and we have probably a week or two of cold, rainy weather, with slight frosts probably, with cold dry winds. This at once arrests the development of the young shoots and leaves; the sap becomes stagnant and diseased; the bark is ruptured, and gum oozes out all over the younger parts; the leaves, whether in an embryonic condition, rolled up in the bud, or half or wholly expanded, become swollen and diseased; then mildew attacks them, as it is always ready to reign upon sickly or feeble vegetation, and with this aphides and

other insects; hence the opinions that mildew or insects were the cause of the disease.

1849, we think, was the first year this disease appeared in Western New York, in a serious form. That spring was cold and changable. 1850 was similar, and the curl was worse than before, and so has continued since. One strong argument, at least so we regard it, in favor of this view, is the fact that if we have fine weather at the opening of the peach buds, we have very little curl, and that immediately after a change to cold the curl appears, and its severity is always in proportion to the intensity and continuance of the cold. Then again, as soon as the weather becomes warm and steady, the diseased leaves drop and new healthy leaves appear, and the disease is no more seen that season, not a symptom of it. Besides, some varieties are much less affected by it than others. We have a very hardy French variety, *Pêche de Vignes*, that scarcely ever shows a curl in the worst seasons. We have a short row of six trees that have come almost hourly under our observation; the varieties are the Snow, Old Mixon Free, La Grange, Crawford's Early, Hains' Early, and Cooledge's Favorite. These were all planted at one time, of the same age, and in the same soil, and have been treated exactly alike, but the Crawford's Early and Cooledge's Favorite have suffered so much less than the others from the curl, that the trees are nearly twice as large, and both have now a good crop of fruit on, while the others have few or none. In going through an extensive orchard we might find many instances of this kind.

In addition to this, we find that trees in sheltered gardens suffer less than those exposed; and under glass, there is no such thing as curl. Are not all these facts sufficient to warrant the opinion we have expressed?

The article we have quoted says, "the disease sometimes occurs after a succession of warm days." We admit this, but it never has appeared to our knowledge after warm days without the intervention of cold nights. Has anyone seen it appear in warm weather, say in June, July, or subsequent months?

It says, too, that "the first opening of the young leaves show the symptoms when they have never been exposed even to a cold night." We grant this, but as we have said, the sudden and violent check given to the tree affects every part, and the leaves even while rolled up in the bud. Neither can we agree with the opinion that "vigorous growth is the best remedy," for we have seen some of the most vigorous growing trees suffer most seriously. We regard *well ripened wood* as more important than vigorous growth, but we would combine these if we could. Were not the trees quoted as examples benefited by some kind of protection? To avoid in some degree the effects of the mildew we can now only suggest the selection of *hardy* varieties and planting in situations somewhat protected from the cold west and north-west winds. Will peach growers who have had opportunity for extensive observation give us the benefit of their experience on this subject? If we have drawn erroneous conclusions from our own observations we shall be thankful to any one who will set us right.—*Gnawee Farmer*.

To Make one Farm equal Three.

G. T. Stewart, Esq., in a recent Address before the Ohio Agricultural Society, thus speaks of this subject:

Many farmers who are destroying the productiveness of their farms by shallow work, as they find that

their crops are diminishing, think only of extending their area, by adding acres of surface, as if they supposed their title deeds only gave them a right to six inches deep of earth. If they will take those deeds, study their meaning, and apply the lesson to their fields, they will soon realize in three-fold crops the fact that the law has given them three farms where they supposed they had but one—in other words, that the subsoil brought up and combined with the top soil, and enriched with the atmospheric influences; and those other elements which agricultural science will teach them to apply to their ground, will increase three fold, the measures of their productiveness. To show to what extent the fertility of the soil can be increased I refer to a statement in the last Patent Office Report. In the year 1850 there were nine competitors for the premium corn crop of Kentucky, each of whom cultivated ten acres. Their average crop was one hundred and twenty two bushels to the acre. At this time the average crop of wheat per acre in the harvests of Great Britain, on a soil cultivated for centuries is about double that production on the virgin soil of Ohio.—Why is this? Simply because British farmers are educated men and

apply their work wisely. They pay back to the earth what they borrow; they endeavor by every means in their power, to enrich their ground, and in return it enriches them. If our farmers instead of laboring to double their acres would endeavor to double their crops they would find it a vast saving of time and toil, and an increase of profits.

Many of them never think of digging ten inches into the soil, unless they have dreamed about a crock of gold hid in the earth; but if they would set about the work of digging in earnest, every man would find his crock of gold, without the aid of dreams and divination.

We have great advantage over the British farmers in the fact that nearly all our farmers hold the land they cultivate in fee simple, while in England they are chiefly tenants, hiring the land of nobility paying enormous rents to the proprietors besides heavy taxes to government. Taxes here are comparatively light, and our farmers are their own landlords. Hence they have been able to pay three fold wages for labor in proportion of those paid in Europe, pay the cost of transportation and yet undersell the British farmers in their own market.

India Rubber Washing Machine.--Fig. 1.



The annexed engravings represent the new Washing Machine of E. L. Evans, who was residing in Hartford, Conn., when the patent was granted to him on the 10th of last May, but who is at present dwelling in New York.

Figure 1 is a perspective view of the machine, and figure 2 is a longitudinal section through the middle of it.

The nature of the invention consists in construct-

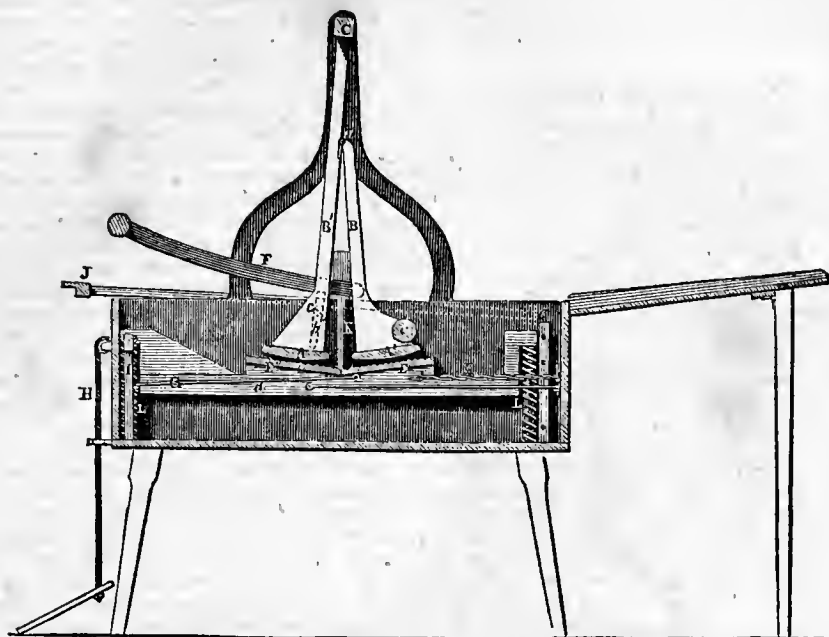
ing two rubbers, which are secured on arms suspended from two standards; one of the rubbers is secured to the lower end of one arm, while the other is suspended to a similar arm secured to the main one, by a hinge, which allows the rubbers to be drawn together or forced apart by the operator, at pleasure. The rubbers spoken of, act so as to rub the cloth, to be washed, between them and fluted wash-boards placed under them, one of which is stationary and the other

movable—sliding—being moved by a treadle operated by the foot, to draw the cloth through regularly, to present new surfaces to be rubbed. The movable rubbers are of prepared india rubber, and are made to be of a nature like the human hand—something

like a cushion, whereby the clothes are well rubbed, with as little injury as possible to their texture.

The machine has a large box with legs on it, a discharge pipe at one end, and a soaping table to prepare the soiled parts of the cloth, *b*, for the suds box,

Fig. 2.



there to be rubbed between the rubbers. *A A* are the two india rubber cushion rubbers; they are secured on the suspended arms, *B B'*; the one, *B*, is attached to the other by a hinge, at *a*, to allow the two rubbers to open, to let the cloth pass through between them to be rubbed. The arms swing on an axis pin, *C*, secured to the upright standards of the box. *E E'* are the two fluted wash-boards under the rubbers, *A A'*; these boards are always close together when the operator is pushing the rubbers back and forth by the handle, *F*, and kept so by pressing with his foot on the stirrup, which draws down the cord, *H*, and draws forward the board, *E*, it being attached by brass rods, *G*, to the crossbar, *I*, at one end, and at the other by india rubber spring cords, *X*, secured to the back of the box. When the foot relieves the stirrup, the spring cords, *X*, draw apart the board, *E*, and this leaves a space between the boards to let the rubbed clothes drop down into the suds box. To do this, and take a new surface to be rubbed, the rubbers, *A A'*, which are like jaws, have to be thrown apart—opened; this is done by slightly raising the handle, *F*, as there is a shipper attached to the arm, *B*, shown by dotted lines, *c*, fig. 2, which works in a guide angle slot, *b* (fig. 2), thus opening the space between the rubbers, to take in a new surface of cloth over the small roller, *c*, and feed it in towards the centre, to be rubbed between the boards with the

rubbers. The rubbers are closed by bringing the arm, *F*, to a horizontal line.

The fluted wash-boards can be elevated or lowered, so as to bring them very near to, or a greater distance apart from the rubbers, and thus enable the operator to wash a piece of lace or a quilt in the same machine. The boards *E E'*, rest on two side stretchers, *d d*, which rest on a coiled spring, *L L*, at each corner of the tub. *J* is the cross handle of a side lever (one on each side) secured on a fulcrum pin, *e*, at one end, and attached to vertical sliding blocks, *K K*—one on each side—which rest on the stretchers, *d d*, that support the wash-board. By pressing on *J* with the hand, the operator depresses the wash-boards, *E E'*, and graduates the distance between them and the rubbers, *A A'*, with the utmost nicety, to wash any article—the most delicate or coarse.—The action of this machine is like that of rubbing clothes between the hands—the best principle yet known; and it is the best washer that has ever been brought to our notice. With the hand the operator merely pushes the handle, *F*, back and forth, to rub the clothes, and as the rubbers are poised on a centre, this work is light and easy; with the hand and foot the clothes are rubbed, and the rubbers and boards thrust apart and brought together so as to feed in new surfaces, and deliver the clean clothes with great facility. The soap board is for the purpose of rubbing

the soap on the clothes—the most soiled parts, previous to their being placed in suds at the right hand end of the box, from which they are fed in over a roller *c*, between the rubbers, *A A'*, down between the boards, *E E'*, and delivered after rubbing down into the box and taken out, when finished, at the left hand side. This washing machine is certainly novel and worthy of great favor by all good housewives.

One of these machines will be exhibited at the Crystal Palace, and the patentee can be addressed by letter at No. 551 Sixth Avenue, (New York.) The machines are manufactured in Newark, at prices varying for \$12 to \$16 and upwards.

Prize Essay on Pigs.

[CONTINUED FROM LAST NUMBER.]

The respective merits for conversion into fresh meat, pickled pork, bacon and ham, with the modes of preparing the same.—In choosing a pig for any of the purposes above enumerated, or, in fact, for any purpose, or of any breed, there are certain points which should be looked for in all, viz:—the skin should be soft and thin, of a bright pink colour; the neck short, the chest wide (which denotes strength of constitution); broad, straight back; short head, and fine snout; small legs and hoofs; the snout should be slightly curved upwards, and, in the large breed, it not unfrequently happens that there exists a pretty prominent swelling on the snout between the nasal and frontal bones: the sow should have at least twelve teats. If properly supplied with food the pig can be profitably sent to the butcher from the age of one month to four-and-twenty; it would, therefore, be improper to pass over in this place the relative merits of the various breeds in profitably rearing those luxuries yeilded sucking pigs, which the late Charles Lamb declares to be, “Of all the delicacies of the whole *mundus edibilis* I will maintain this to be the most delicate. I speak not of your grown porkers—things between pig and pork, those hobbledchoys—but a young and tender suckling, under a moon old, &c.” I have already shown that the large English breed are prolific and good mothers; that the Chinese have an early aptitude to fatten, are prolific, but bad nurses; if, therefore, the object in breeding is to get quit of the progeny, about or soon after they have arrived at lunar maturity, we should put a Chinese boar to the large English sow: if we want the hobbledchoys of eighteen or a score pounds weight, which are to be seen so frequently in Leadenhall Market, we must breed the Neapolitan cross already noticed, but which I shall in future define by the term improved Essex breed. No description of breed will raise sucking pigs to the same size at six weeks old as the cross just noticed: they also form excellent porkers, speedily attaining a weight of 48 to 56 lbs. (the favourite size for porkers); if allowed to grow much larger, it will be found to pay better to treat them as stores until they are 10 or 12 months old, and then put them up to fatten; in this way, however, they are not so profitable as the improved Essex, neither do they make such fine bacon as the improved Berkshire. For the purpose of obtaining moderately, or even large sized hams and bacon, no breed stands so high as the improved Berkshire, which may be considered the most generally useful to a farmer who desires a sort generally profitable in any stage of its

growth. The improved Berkshire sow will suckle ten to a dozen sucking-pigs within a moderate period, especially if they are assisted by artificial means hereafter to be noticed; in this respect however it is by no means equal to the improved Essex or the Old English sow when put to a Chinese boar. For the purpose of making fine delicate pickled pork, the Berkshire is inferior only to the improved Essex; and for the purpose of making ham and bacon of moderate size, viz., from 10 to 12 stones weight the carcass—not quite equal to the Essex at the former, but pretty nearly so at the latter and increased weights. The distinction here drawn arises from the fact that the Essex breed, if properly maintained from the first, arrives very early at maturity, in so far as its frame or bony structure is concerned, whilst the Berkshire takes a longer period to arrive at its ultimate and larger size; the consequence is, that a small breed like the Essex will, with proper forcing, arrive at its full natural size by the time it is 9 months old, whilst the Berkshire takes 12 or fifteen months ere it ceases to grow. Now, it is a well known fact, that during the earlier stages of animal life the nutritive parts of the food ingested by the animal and assimilated by its organism, is appropriated principally to the development of the frame, the growth of the bones, tissues and muscles, together with a moderate amount of fat, the uses of which latter will shortly be noticed. Of the inorganic constituents of the food phosphate of lime is the one for which there exists the largest demand, constituting as it does so large a portion of the gross weight of bones, from 15 per cent. at birth to 50 per cent. when aged, and entering more or less as a constituent of the muscles and tissues. Of the nitrogenous portions of the food of animals: the muscles, tissues, and gelatinous substances absorb the whole excess above the quantity excreted. Of those articles of food, whose chemical composition consists of carbon and hydrogen, such as starch, sugar, fat, &c., there can be little doubt but they, by their combustion, afford heat, and further, by the amount of their excess beyond that required for the supply of animal heat, and not otherwise excreted, are assimilated by the animal system in the form of fat, also aiding in the composition of the other animal substances, requiring, in addition to nitrogen; carbon, hydrogen, and oxygen for their formation, such as muscle, gelatine, &c. It forms no part of this question whether fat is assimilated only from fat which pre-existed in the animal's food, as asserted by Dumas and Boussingault, or that fat is formed from the starch of the food as asserted by Liebig. According to all that is at present ascertained on this subject, the dispute has little practical bearing on the matter in question; this much is however certain, that all parties concur in opinion that animal heat is derived from the combustion of the carbon of the starchy matters ingested, and *may be* so by the combustion of fatty matters: in fact, in cases of fever and starvation, we know no other way how the animal heat is maintained than by the combustion of the fat previously stored up in the system. The rapid diminution of weight in animals attacked with fever is well known, and is invariably coincident with an increased circulation of the blood and higher animal temperature.

The preceding brief physiological dissertation is inserted because, on the circumstances just detailed, in a great measure depend the relative qualities of the different breeds for early or late fattening; and also has a most important bearing on the kinds of food which ought to be employed at the various pe-

riods of their growth, as will be shown hereafter when the subject of feeding and fattening is taken into consideration. Seeing that the bony structure, gelatinous substances, and muscles are the parts of the animal which earliest arrive at their full development, it follows that, other things being equal, those breeds which arrive at their full growth in the shortest period will be the kinds naturally adapted to secrete a superabundance of fat amounting to disease (but which is the farmer's profit) in the shortest period from the time of birth, and consequently least expenditure of food, presuming animals of different breeds but of like age eat like quantities. Carrying this comparison a step further, viz., that if two animals so treated and killed at the same age—say at nine or ten months—were to be found when dressed to weigh alike; but the one animal, say an improved Essex, and the other an old English pig, their marketable value would be very different, fully 20 per cent. The first would present a fine, thick coating of firm fat embedded in the cellular tissue, the ham would present the Epicurean quality of marbled flesh, with a due amount of external fat, and the omentum would yield a fine leaf of white lard; the roasting-pieces, if cut out for that purpose, such as the muscle running from the neck down to the loin, and including the joints commonly called the spareribs and loin, will be found tender, juicy, and fat. Another great advantage of this breed is, that in proportion to its size the weight of the fine joints and pieces, such as the ham, shoulder, and belly, where the desirable intermixture of lean and fat, so much coveted by epicures, is to be found, is much greater relatively to the whole carcase than will be found in the larger breed. On examining the carcase of the larger breed the enveloping fat will be found of a light grey colour, soft, and flabby; the muscles stringy, and when salted will run up greatly, yielding at the same time a large quantity of brine; so much so, that when dry the whole weight will be found to have diminished in a much greater proportion than the same weight of pork from the smaller breed. To say nothing of the greater weight of bone in the latter than in the former kind, in cooking, the meat from the first will be found to scarcely diminish in size, whilst the second will be seen to shrivel up considerably. This will be especially seen in the belly parts. The cause of this difference is, that in the matured animal the cellular tissue, ligaments, &c., have fully developed themselves—have become firm and compact; while in the growing animal these portions of the body remain in a softer and more gelatinous state, in consequence of the presence of moisture. It will be seen that this form of tissue is almost indispensable to the growing animal, in order to adapt it to its constantly increasing expansion of frame. When arrived at its full growth, this softness gives place to firmness and compactness of texture. A less amount of water is now found in the tissues, and the flaccidity of youth is succeeded by the elasticity of adolescence—the compactness and strength of maturity being followed by the rigidity of age. The effects arising from cooking and salting meat in the forms presupposed are in unison with the above facts: in meats salted or cooked, derived from the immature animal, the gelatine is dissolved out of the tissue, and the animal fibre contracts, which, combined with the circumstance of the tissues bearing so much larger a ratio to the fatty and muscular parts, cause the meat to contract and shrivel up, whilst the disproportion of sinewy substance to the whole mass makes the meat hard and tough; in maturity, the tissue, are capable

in boiling of absorbing moisture and becoming softened: this kind of meat has consequently the tenderness so desirable. Although of two animals treated as described, the profit decidedly preponderates in favor of the smaller breed, it by no means follows if the experiment be carried further,—that is, until the larger breed has arrived at maturity, that the profit would not be with the larger animals; so after the smaller breed has arrived at a certain amount of obesity, it would merely become a consumer of food without any commensurate advantage: on the other hand, the larger animal would be constantly developing its frame; and when fully matured, I have my doubts whether any animal yields so large a return of meat for the quantity of food consumed as selected mature animals of the old English breed. In this respect the improved Berkshire bears an intermediate place between the smaller and the larger breed, arriving at maturity earlier; but I doubt, when fully grown; whether it puts on the same quantity of flesh for an equal amount of food, and in as short a time as the old large breed at maturity. Of the three breeds now named by way of illustration, my own experience leads me to decide that for all purposes, whether as fresh pork, pickled pork, ham and bacon, the merits of the improved Essex exceeds all other kinds; that the improved Berkshire follows; whilst the old large kind is a mere bacon pig: as such, however, it is highly esteemed in the farm-house; the huge flitch, with its great depth of fat, being considered the most economic food for labourers—in which opinion the labourer will be found to concur, as whenever he has a choice, or from circumstances is compelled to purchase for himself, he will always be found to prefer the thick fat part of the flitch.

In choosing a breed of pigs which is intended to be sold to parties who follow the business of bacon curing, the size of the breed will be greatly determined by the market in which they are to be disposed of. Very large fat bacon is principally required for the mining districts of Warwickshire, the Potteries, and the manufacturing districts of Lancashire and Yorkshire. "Middles" are also sent from London and Liverpool to the agricultural counties. Generally speaking, large sized bacon is the favourite kind amongst farmers. The objectionable feature in the larger breeds is the length of time they require before arriving at maturity; whilst growing, they doubtless increase in size at a small expense of food, and will eat matter that will be refused by fattening pigs, and in this respect, perhaps, they are the most valuable animals of any, that is, to fare by chance. If, however, they have to be maintained on food which has to be specially provided, I cannot think they will yield an equal quantity of meat, when fattened and killed at from 18 months to 2 years old, as would be formed were the same amount of food given to the Essex breed, killed at from 9 to 12 months old, or the Berkshire at from 12 to 15 months old, at which ages it will be found most profitable to kill these respective breeds. With regard to fresh pork, it is brought in two different forms to market; in the first stage, in which may be termed porklings, the carcase weighing from 40 to 60 lbs. each: in this state the carcase is jointed into hams, hands, spareribs, loins, and belly-pieces. The spareribs and loins are always used as roasting pieces, the hams indiscriminately for roasting and pickling. The hands and belly-pieces are always pickled: for this purpose no breed answers so well as the Essex; in this state the outside fat and skin, or crackling as it is called, is cut along with the lean part and so served at table.

The other form in which fresh pork is sold is when the pig has arrived at a pretty mature state and fit to make bacon. The only parts, however, sold as fresh meat are the sparerib and loin, together with steak-pieces off the shoulder. Along with the loin and sparerib some persons cut out the whole of the ribs, but this is a bad practice, as the short ribs greatly assist in curing the bacon, and should always be left on the side. The ribs should be divided with a saw midway between the breast and back bone; a sharp knife should now be employed to cut out the lean or muscular part of the neck and loin from its exterior covering of fat, the cutter up having previously divided with a saw the large bone of the pelvis, commonly known as the haunch or haitch-bone. He commences cutting at the neck, and makes a clean cut down to the ham, leaving only a thin portion of the muscle or lean part, about the thickness of a shilling, attached to the fat or back part, as many more cuts are made in the same direction as are required to separate the joint up to the point where the ribs had previously been divided by the saw. Steak pieces for frying or making sausages and pies may be now cut off the lean part of the ham, which permits the shoulder-bone being easily separated. The fore-shank may be either cut out or left in—if for home use, it had better be cut out and used as pickled pork. The ham can now be cut off, commencing where the ham joins the flank, and cutting so that the outside skin will form a circle or ellipsis with the skin that lines the inside of the ham. This mode of cutting up pigs is not much practised except for home curing, and for that purpose is without doubt, the most profitable; it is also followed to some extent with pork-butchers in Lancashire, Warwickshire, and Staffordshire, who combine the curing and vending of bacon and hams with that of pork-butcherings.—These are generally extensive retail dealers, though there are some who confine themselves to the wholesale trade, in which case the loins and spareribs are disposed of to retailers and general butchers, who take a few joints to supply their customers with pork, preferring this mode to slaughtering a pig, and thus having the chance of the sides and hams being left on their hands to cure. A considerable quantity of the joints of pork cut as described, and sold by salesmen at Newgate Market, are brought up by railway from Birmingham, being sent up by the wholesale pork-butchers of that place. For home use, or where a retailer has a demand for bacon and hams, there is no method of cutting up a pig that economises the meat so much, the lean of the neck and loin losing greatly in weight during salting, especially if the bone be anywise separated from the muscular part so as to leave it bare. At Belfast, the back-bone being first taken out, the ribs are afterwards cut away, the knife passing as close as possible to the rib, and leaving as much of the muscular or lean part attached to the fat as such a separation will admit; this is a wasteful mode, as the muscular part so left will not weigh, when cured and dried, one-third of the weight that it would do in the state of fresh meat; it is a practice only justifiable in Ireland, where it is found impossible to get rid of what is there termed the offal in quantities anything proportionate to the amount being continually made at the large slaughtering establishments. A better plan than the Belfast mode is that followed in the west of England and south of Ireland, in such places as Waterford, Cork, Carrick, &c., in all which places it is the practice to singe the pigs intended for bacon. I have not described the mode of killing and scalding pigs, as that is gener-

ally well understood, and a professed butcher is usually employed for the purpose; singeing is, however, not so generally known. The pigs being first knocked on the head, generally five or six in number, are instantly drawn to a place immediately contiguous, and placed with their necks over a trough prepared to receive the blood; they are then stuck in the neck with a knife in the ordinary manner; whilst they are bleeding, a man with a fork distributes a thin covering of wheat or rye straw, the stronger the straw the better for the purpose: in the absence of wheat or rye straw furze and heather are used as substitutes. At Waterford I have known wheat straw fetch 6l. per ton for this purpose in the months of June and July. The straw is now set fire to in the direction of the wind; if the man sees that there is not enough, he applies more to those parts requiring it, but in a general way, with practice, the quantity required is applied sufficiently at first, the tender having merely to adjust the burning straw, taken from those parts where it appears to be scorching the skin too much, and putting it on those places where the fire appears too little; this he does by using a common hay-fork. When burned out, which is done in two or three minutes, the hogs are turned, and the underside, now uppermost, undergoes the same operation: this completed, they are drawn with ropes and pulleys on to hooks, similar to those seen in all slaughterhouses. The rough dirt, singed hair, &c., are now scraped off; warm water being constantly thrown over the carcasses, when another scraping commences. In a general way three scrapings, one without and two with water, have to be gone over before the skin is deemed sufficiently cleaned. The cleaning finished, the entrails, viscera, &c., are taken out in the ordinary way, water is thrown over the whole carcase inside and outside and left to cool; in winter-time this will always occur within twenty-four hours. When cold, a man goes round and cuts the heads off; he then takes a knife and makes a clean cut from the tail along the centre of the back-bone to the termination of the neck, baring the whole of the vertebræ; he now takes a sharp cleaver, and, beginning at one side of the vertebræ, commences separating it from the ribs at the point of their attachment. The other side is then cleft in the same manner; by this means the vertebræ are cut clear out; he then cuts the ham about 3 inches above the knee-joint. Thus divided, a side at a time is carried to a table where another operator is in readiness, who first makes an incision near the neck, where the fore-ribs inosculate so largely with the back-bone, commonly known as the breast-bone; these, together with four or five pounds weight of the pectoral muscle or breast, are cut out, as it is found by experience that this part does not bleed well, frequently containing several of the larger blood-vessels still gorged with blood, especially in large pigs, and in consequence is not well adapted for curing; it is an act of precaution always to be recommended; it has also the effect of baring the scapula or shoulder-bone. The latter in ticklish weather is sometimes found a formidable difficulty in the way of good curing, or, as it is technically termed, striking the meat and taking the salt, the former term applying to saltpetre, and the latter to the common salt used. This portion of the breast being taken out, the ribs are divided with a fine saw at the points named in the first described mode, viz., about the middle; the upper division is cut out with a portion of the muscle attached to them, leaving the lower portion of the ribs adhering to the side; in Ireland the piece so cut out is called a strip, and weighs, according to the

size of the pig, from two to four pounds weight; in the west of England it is called the griskin, and usually weighs from five to eight pounds; by way of parenthesis it may be stated that the griskin is a most delicious morsel. The cutter is provided with a semi-circular saw; with this he dextrously divides the small knuckle of the femoris or thigh-bone, and detaches it along with the pelvis or haunch-bone.—The muscle connected with the pelvis and a thin cut from the upper part of the inside of the thigh are taken out with the pelvis; by this means the awkward joint which gives so much trouble to housekeepers and others in curing hams is cut out, and the curer obtains free access to the knuckle or superior extremity of the thigh-bone in order to rub in the saltpetre and salt; without this process it would be almost impossible to cure the whole side of a pig, viz., shoulder, belly, back, and ham, in one piece. The difficulty of saving hams from decay or fly-blows is well known to consist principally in properly curing the joint in question; it will, therefore, be apparent that if such a difficulty exists in curing hams, it must be greatly increased when the bulk of the ham remains attached to the side or flitch. These operations being completed, the side is carried to another table, where the operator cuts off any straggling pieces of flesh, together with what may be considered superfluous on the shoulder. He is also provided with a sort of dull iron chisel, to which a cord is attached which passes over his neck, and with this chisel he separates the scapula or shoulder-bone from the muscles attached to it; this being completed, a small noose from another short cord, also placed over the neck of the operator, is now fastened to the narrow and joint-end of the bone; in doing so the workman has to bend his body, the cord being made short expressly for this purpose.

In resuming the upright position he draws out the shoulder, or as it is commonly called, the blade bone; the forearm or knuckle may be either left or taken out, it is usually left with the side: the last operation is sawing off the shank of the ham, which is done a few inches above joint; the side is now fit for the curer. The rapidity with which all these operations are performed quite astonishes the spectator who has not previously seen a large establishment of this kind, several of which in Ireland slaughter from 800 to 1000 large hogs per week during the season, viz., from October to April. The head is sometimes cured by separating the lower from the upper portion, the lower part forming what is called the chap. The more usual way is to split the head into two lateral divisions and throw them into a strong pickle, same as is used for forming pickled pork. The above described mode is that usually adopted in the west of England, and also in those parts of Ireland where bacon is prepared for the London market in the west of England fashion. The York method differs from the west of England mode in having the ham detached from the flitch, and also in not cutting out the griskin, leaving the whole of the ribs attached to the side, only separating the back bone as previously described. The ham is cut either short or long, according to taste; if cut long, the whole of the pelvis or haunch-bone is cut out in connexion with the thigh-bone and ham. The Westphalian ham is an example of this method, and is the best mode for the seller, as he gets the price of ham for a large portion which would otherwise form a sort of offal or make part of the flitch, and so only obtain the price of bacon. This form of ham is the worst for the consumer, as the lower end contains a large quantity of

bone, and is only fit for boiling; it has also its disadvantages with the curer as it disfigures the flitch very much, leaving a long narrow slip at the ham end which can only be used for melting down. On the whole, therefore, the method of cutting the ham short is the best: this is done by sawing the pelvis about the middle and cutting the ham in a circular manner from that point. It is not customary with small pigs to cut out any part of the ribs, but with large pigs it is requisite to cut a portion out of the fore-part, and also to draw out the blade-bone as described in the west of England mode. With small pigs, such as the improved Essex, this may be omitted when they are only from 9 to 12 months old, and having been previously well fed, as the curing of bacon depends greatly on the latter named circumstance; this, together with the fact that small bacon and hams usually obtain the best price, other matters, as quality of meat, &c., being equal, is a strong argument in favour of the smaller description of pig in preference to the larger breeds; also, as here shown, the whole of the carcass can be converted into marketable ham and bacon, without any deduction for offal of much consequence.

[TO BE CONTINUED.]

Pennsylvania Horticultural Society.

Ad Interim Report of the Fruit Committee for September, 1853.

PHILADELPHIA, September 20th, 1853.

To the President Penna. Hort. Society:—

The Fruit Committee respectfully Report, That since the August meeting of the Society, several interesting collections of Fruits from various localities have been presented for their examination.

From Paschall Morris, of West Chester.—Two specimens of a Pear, from a farmer near West Chester. Size above medium, 2 13-16 inches long, by 2½ broad; obtuse pyriform; greenish yellow, with some russet markings, especially at the insertion of the stem, and a faint salmon cheek; stem 1 inch by ½, inserted somewhat obliquely in a small superficial cavity, russeted, and slightly plaited; calyx in a shallow basin, sometimes russeted; seed rather large, dark, flat; flesh of fine texture, buttery, melting; a little more flavor would be desirable; quality at least "good."

From Amos L. Whitman, North Coventry, Chester county, Pa.—Three varieties of Seedling Plums.

1. Fruit an inch and a half long, by one and a half broad; obtuse cordate, suture indistinct; red with a white bloom; stem five-eighths to three-fourths of an inch long, by one twelfth thick, inserted in an open, moderately deep depression; flesh unadherent to the stone, of pleasant flavor, and "good" quality. This variety appears to be wonderfully productive; a twig three inches long by one-sixth thick, contained eight Plums—another two inches long by one-fourth thick, contained seven.

2. Fruit an inch and a half long, by one five-sixteenths; obovate; purple, covered with blue bloom; stem eleven-sixteenth by one-sixteenth; quality inferior, except for culinary purposes.

3. Only one specimen—large, one three-fourths by one eleven-sixteenth inches; roundish obovate; greenish yellow, mottled and dotted with white; suture broad, extending one side from the base to the apex; stem three-fourths by one-twelfth, inserted in a slight depression; stone partially adherent. The specimen being pulled somewhat prematurely,

a correct estimate of its merits could not be formed. We are, however, inclined to think favorably of it, and should be happy to see specimens of it next season.

From Thomas Hancock, Burlington, N. J.—Three boxes containing specimens of a Plum, and thirty-seven varieties of Pears.

1. *Drop d'Or d'Esperin*—a small, round, golden yellow Plum, with occasionally a few crimson dots; stone unadherent, quality "very good."

2. *Cabot*—specimens too much decayed to judge of its quality.

3. *St. Guislain*—in good condition, "very good."

4. *Cumberland*—of fine size, but in quality, "scarcely good."

5. *Mascadine*—"good."

6. *Beurre Goubault*—"good."

7. *Dillen* or *Doyenne Dillen*—of large size and fine appearance, similar in form to the *Hosen Schenck*; three and three-eighths inches long, by three and one-fourth broad; round, obovate; greenish yellow, with spots and splashes of green russet; stem from three-fourths to one inch long, by one-fifth of an inch thick, rather fleshy at its insertion; little or no cavity; calyx open, set in a wide, shallow, sometimes russeted basin; seed ovate, brown, medium; flesh buttery, flavor pleasant, quality "very good." In the London Horticultural Society's Catalogue, and in Downing's Fruit and Fruit Trees of America, *Dillen* is given as a synonym of *Beurre Diel*. We regard it, however, as a distinct variety, ripening earlier than the latter.

8. *Washington*—a favorite Pear with us, attractive in appearance, and of "very good" quality.

9. *Copia*—a very large, handsome, Pennsylvania variety, of "good" quality, when eaten at the exact moment of its maturity.

10. *Great Citron of Bohemia*—scarcely worth cultivating.

11. *Golden Beurre of Bilboa*—fair, and "very good."

12. *Urbaniste*—"Best."

13. *Heathcot*—"very good."

14. *Belle et Bonne*—"good."

15. *Mrie Louise*—specimens not being fine, the quality was only "good."

16. *Onondaga*—inferior specimens, quality only "good."

17. *Cupsheaf*—"good."

18. *A seedling from the Sichel*—originated with Mr. Wm. W. King, of Burlington, N. J. Small; roundish-obovate; uniform yellow russet; stem five-eighths of an inch long, by one-eighth thick; fleshy at insertion; no cavity; calyx nearly closed, set in superficial basin; quality inferior to the *Sichel*.

19. *Beurre d'Anjou*—"best."

20. *Adele de St. Denis*—a new Belgian variety; quality "good."

21. *Fondante de Automne*—highly flavored and delicious; quality "h. st." This variety has recently been extensively imported under the name *Seigneur d'Esperin*.

22. *Bon Clretien Fondante*—"very good."

23. *Fulton*—"good."

24. *Super Fondante*—specimens small; "good."

25. *Gendesheim*—scarcely "good."

26. *Vullee Franche*—quality indifferent.

27. *Napoleon d'Hiver d'Esperin*—decayed.

28. *Sullican*—scarcely "good."

The following ten kinds were not in eating condition: *Althorpe*, *Crassane*, *Buffum*, *Flemish Beauty*, *Colmar Neil*, *Jean de Witte*, *Beurre Diel*, *Bezi de la*

Motte, *Josephine*, *Figue de Naples*.

From Samuel Out, two varieties of Pears and fine specimens of a Plum.

1. *Bartlett*, large, handsome, "very good."

2. *Lo lye*, specimens remarkably fine, $3\frac{1}{2}$ inches long by 3 broad, possessing the rich, vinous flavor of the *Brown Beurre*; quality "very good."

3. *A Large Red Plum*, $1\frac{1}{2}$ inches long by $1\frac{1}{2}$ broad; oblong; light red; suture extending on one side from the base to the apex; stem three-quarters of an inch long by one-twentieth thick; flesh partially adherent to the stone; quality "very good."

From Robert Buist—specimens of two Pears and one Apple.

1. *A supposed Seedling Pear*—bearing some resemblance in form and flavor to *Henry 4th*—rather small, two and one-eighth inches long by one and one-eighth broad; obovate pyriform; yellowish green, with large green russet spots and blotches, and a brownish red cheek; stem broken—fleshy at its termination, inserted without depression; calyx closed, set in a shallow, furrowed basin; seed small, black—flesh melting, buttery, of fine texture—flavor vinous—quality "very good."

2. *Doyenne Robin*—rather large, two and a half inches by two and three-quarters round, bergamot shaped; greenish, covered with russet dots and splashes; stem usually very long and thick, from one and a quarter to two inches long by one-sixth thick, inserted in a deep, narrow cavity; calyx small, set in a narrow, moderately deep basin; seed large, black; flesh melting, somewhat granular; flavor pleasant; quality "very good."

3. *Fair Maid Apple*—the only specimen on the tree; rather large, roundish-oblate, inclined to conical, beautifully and delicately striped with carmine; flavor sub-acid; quality inferior.

From Wm. G. Waring, Boalsburg, Centre county.—A box of fruit containing specimens, of 15 varieties—3 of pears, 4 of apples, and 8 of plums.

1. *The Juliette*—Mr. Waring says this variety was introduced into Centre county from Germany, as the *Summer Baccarion*. The specimens were very fine, and quality "very good."

2. *Summer Bon Creien*—cultivated at Boalsburg under the names of *Sugar* and *Honey pear*, flavor very saccharine, but of inferior quality.

3. *Deurbora's Seedling*—very handsome specimens, and of "very good" quality.

4. *The Sink Apple*—Mr. Waring informs us that this native red apple "originated on the farm of Hon. George Boal, of Boalsburg. The original tree, which is now dead, stood over a cavern, into which a stream emptied—hence the name. It was famous for its constant and abundant yield of fruit, which was in great demand for cooking, and continued in use from July to October." Specimens, when received, were entirely decayed.

5. *The Summer Bell Flower*—considered, in Centre county, a superior early baking apple, and in season the last of July and August,—also entirely decayed when the box was opened.

6. *The Royal Sweet*—a large, "good" sweet apple, which is apt to fall from the tree.

7. *The Bush*—a native apple on the farm of Mr. Christian Dale, near Boalsburg, and found growing in the woods by his father. Mr. Waring says this variety is "an excellent bearer, and a great favorite in an orchard of choice sorts." Size two and three-quarters by three inches; oblate, inclining to conical; greenish yellow, with many russet dots near the crown, and occasionally a faint blush; stem

seven-eighths of an inch by one-ninth, inserted in a deep, open, furrowed cavity; calyx very small, set in a deep, narrow, plaited basin, seed brown, broad, short; flavor pleasant; quality "very good."

8. *Early Yellow Prune*—said to have been obtained from Bedford county, many years ago, and is represented as, being "a free grower, prodigious bearer, and not apt to rot." Size one and five-eighths inches by one and one-quarter; oval, pointed at each end; stem five-eighths of an inch long by one-twentieth thick; flesh free from the stone; flavor delicious; quality "very good."

9. *Red Prune*—also introduced into Centre county from Bedford. This variety was sent on a former occasion from Lancaster, under the name of "Bottle Plum." Two inches long by one and one-eighth broad; pyriform; with a long, slender neck; suture extending on one side from the base to the apex; pale red; stem one inch long by one-sixteenth thick; a handsome plum, of peculiar form, and "good" quality; but said to be an indifferent bearer.

10. *Imperial Gage*—Mr. Waring remarks of this variety, that "the tree is very free from leaf blight, and the fruit from rot, hanging long, shrivelling, and becoming very sogary." Specimens fine; quality "very good."

11. A *very large, late purple Plum*, resembling *Dunne's Purple*, and said to be "a very excellent grower, a full bearer, and not inclined to rot," very large, two inches long by one and thirteen-sixteenths broad; oblong—purple—stem three-quarters of an inch long by one-twelfth thick—flesh free from the stone. Specimens not sufficiently ripe to test their quality.

12. *The Galbraith*—an early Plum, said to have originated with the late Mr. Galbraith, near Boalsburg; and is represented as being a straggling grower, but the best early plum cultivated in that vicinity. An inch and a half long by one and five-sixteenths broad—oval, purple,—stem five eighths of an inch by one-fourteenth,—flesh tender, juicy, adherent to the stone—flavor luscious—quality "very good" if not "best."

13. *Prune Damson Plum*.—One and a half inches long, one and three-sixteenths wide, one and one-sixteenth thick—flattened oval—blue—stem one and a half inches long by one-eighteenth thick—flesh rather dry, entirely free from the stone—flavor agreeable—quality "good."

14. *Coe's Golden Drop*—received from England for the Magnain Bonum; specimens large and fair, but not mature.

15. A *variety cultivated in the neighborhood of Boalsburg as the Peach Plum*—from which it differs in several particulars. Large, one three-quarters inches by one and six-eighths; oblong; salmon colored; stem three-eighths of an inch by one-fourteenth; stone adherent, long-obovate, one and one-sixteenth inches long, five-eighths wide, and seven-sixteenths thick; of pleasant flavor; quality between "good" and "very good."

From Thomas M. Harvey, Jennerville, near West Chester, Pa., the *Beurre Oudinot*—one of the very new French Pears, imported by Mr. Harvey, in 1851, and probably named in honor of Marshall Oudinot, Duke of Reggio. Size very large, three and three-eighths inches long by two and three-fourths broad; pyriform; yellowish green, with a brown cheek; stem one inch long by one-fifth thick, curved, inserted somewhat obliquely with little or no depression; calyx of medium size, set in a wide, shallow basin; seed of a pale cinnamon color, long, acuminate, flesh of rather fine texture, juicy flavor pleasant;

quality "very good."

From Isaac B. Baxter; three varieties of Pears, and the *June Peach*.

1. *The Bartlett*—one specimen of immense size, measuring three and three-fourths inches long by three and three-fourths broad, and weighing twelve ounces.

2. *The Kingessing*—specimens from a tree double waked on quince, large and fine, measuring three inches by three and one eighth, and weighing eight ounces. When grown on quince, the fruit is larger, broader, and more fair than that grown on Pear stock; quality "best."

3. *The Washington*—specimens remarkable for size and beauty, quality "very good."

4. *The June Peach*, (Baxter No. 1.)—very large and of delicious flavor, quality "very good."

From Charles Kessler, of Reading—a box of fruit containing a Seedling Plum, a Peach, an Apple and six varieties of Pears.

1. *Seedling Plum*—an inch and five-eighths long, by one and five-sixteenths broad; obovate; light red, suture extending on one side from the base to the apex; stem three-fourths of an inch long, one-eighth thick; stone partially adherent; flavor sweet and pleasant; quality "good."

2. *Peach*, grown by Mr. Lott—large, three inches long by three and one-eighth broad; roundish; dark red on a greenish white ground; suture distinct, extending more than half round; cavity moderately deep; flesh white, red around the stone, juicy, adherent; delightful flavor; quality "very good," if not "best."

3. *Apple*—small, two inches by two and a half, roundish oblate inclining to conical; fair yellow, with occasionally a faint blush on the side exposed to the sun; stem three-fourths of an inch long by one-twelfth thick, inserted in a deep, open cavity, russeted in rays; calyx closed, segments very long, set in a medium sized basin, which is sometimes slightly plaited, flesh yellowish white, tender; flavor sprightly, quality "good."

4. *Rushmore's Boncretien*—grown by Mr. Wunder, very large and very beautiful; quality scarcely "good."

5. *Bartlett*—specimens large and handsome.

6. *The Washington*—specimens quite large and exceedingly beautiful.

7. *White Doynne*—specimens much fairer and finer than those usually grown in the country.

8. A *Pear* resembling the Cushing—two and a half inches long by two and a half broad; round obovate; fair yellow; stem three-fourths of an inch by one-seventh, inserted in a very narrow cavity; calyx open, set in a shallow basin; seed rather large, brown, plump, with an angle at the blunt end; fresh fine texture, buttery, melting; fine vinous flavor, quality "very good."

9. A *Pear* having some resemblance to the Chinese Stone Pear, specimens not in eating order.

From Samuel Jones—*The Hanover Pear*—from Hanover Furnace, New Jersey.—These were the finest specimens of this variety that we have yet seen; some of them measuring nearly three inches long by two and five-eighths broad. In size it is usually rather small; round obovate; green, with dull green-russet markings, and a brown cheek; stem one inch by one-ninth, inserted in a shallow cavity usually angular; calyx open, set in a plaited, sometimes furrowed, irregular basin; seed large, plump, acuminate; flesh greenish yellow, exceedingly melting and juicy; flavor pleasant; quality "good."

From Dr. J. K. Eshelman:—A box containing fine specimens of twelve varieties of Pears, including the Diller. The four following kinds were not in eating condition: *Catinka*, *Thompson*, *Mexican*, and *Doyenne Boussoek*. The variety brought for the *Louise Bonne de Jersey* is not true, and is probably *Capiaumont*. *Bartlett*, fine specimens, of "very good" quality.—*Dunmore*, "good." *St. Ghstlian*, "very good." *Fondante de Malines*, "very good." The *Duke of Bordeaux* is the same as *Dumas*, *Epine Dumas*, and *Belle Epine Dumas*; quality "good." *Heves*, scarcely "good" specimens very small. The *Diller*—size below medium; roundish-ovate; with one or more of the longitudinal depressions or sutures seen in *Dearborn's Seedling*; skin cinnamon russet; stem an inch to an inch and a half long, by one-seventh thick, inserted by fleshy rings without depressions; calyx open, set in a shallow, rather wide basin; seed small, dark, with an angle at the blunt extremity; flesh somewhat granular, buttery; possessing a fine perfumed flavor; quality "very good." Period of maturity last of August.

From Wm. S. Cleavinger, of West Philadelphia:—Large and fine specimens of the *Bartlett*, from his own garden,—and the noble *Susquehanna* Peach, from Harrisburg, its original location. The *Susquehanna* is a Peach of the largest size, abounding in juice of a most delicious flavor; quality "best."

From Caleb Cope:—Beautiful specimens of the *Eluge* and *Vermash Nectarines*—remarkably fine in appearance as well as in quality.

From Dr. Arrott, of this city:—A *Seedling Grape*. Size medium; round; greenish white; bunches small; flesh pulpy; odor peculiar; flavor pleasant; quality good; leaf trilobed.

From Gerhard Schmitz:—A *Seedling Grape*.—Large; oval; purple; bunches loose, large; resembles the *Isabella* in appearance and flavor; quite equal to it in quality, and perhaps a little earlier.

From Charles Jones, through Mr. Allan W. Corson, Montgomery County:—Large and fine looking specimens of the *Vandiver Apple*, not ripe.

From Isaac Garrettson, through Mr. Alan W. Corson, Montgomery County:—Handsome specimens of a small; pleasant, half breaking Pear, grown on the premises of Mrs. Rachel Maulsby, which we regard as the *Gros Rousselet*, and which, by the London Horticultural Society, is deemed unworthy of cultivation.

From Samuel Overn, Steward of the Girard College:—Remarkable fine specimens of the *Seckel Pear*, grown on the College premises.

From Mrs. John B. Smith:—Two varieties of Pears.

1. *The Moyamensing*—The fruit of this variety remains only a short time in perfection; but this defect is compensated by its ripening in succession, for a considerable period. When eaten at the exact moment of its maturity, the flavor is delicious, and the quality "best."

2. *Poire d'Abondance*—This little Pear is always beautiful, and a most abundant bearer; quality sometimes "good," occasionally "very good," very often indifferent. In the "Fruit and Fruit Trees of America," *D'Abondance*, *D'Amour*, and *Ah Mon Dieu*, are considered one and the same Pear. In appropriating these names to a single variety, Mr. Downing followed, and was misled, by the Catalogue of the London Horticultural Society. But so far from being identical, *Poire d'Amour* and *Poire d'Abondance* are two entirely distinct varieties, differing essentially in size, form, color, and period of maturity. The fruit of the

former is very large, while that of the latter is small. The error of considering them identical probably arose altogether from the fact that the name, *Ah Mon Dieu*, was an acknowledge Synonym of both. It is stated, however, on the authority of a distinguished French Pomologist, that this appellation was given to each for a very different reason—to one, in consequence of its beauty and productiveness—to the other, on account of its enormous size.

From William Canby, Wilmington, Delaware:—A *Seedling Grape*. Bunch four and a half inches long, by two and three-quarters broad, so compact as frequently to destroy the rotundity of the berry. Berry from seven-sixteenths to nine-sixteenths of an inch in diameter; roundish, inclining to oval; skin of a violet color, thickly covered with bloom, and semi-diaphanous; seed small, dark cinnamon; flesh tender, very juicy, not pulpy; flavor sweet and pleasant; quality "best" for a grape that will grow in open culture.—Leaf trilobed but not deeply, interruptedly serrulate, auriculate.

On motion, resolved, that the Pennsylvania Horticultural Society hereby offer a premium of one hundred dollars for an effectual and economical remedy, which shall prove satisfactory to the Society, against the ravages of the curenalis.

From the New England Farmer.

The Marrow Squash.

FRIEND BROWN:—In the September No. of the *Farmer*, M. TENNY, of South Groton, asks some of your correspondents to give him information about cultivating the marrow squash. For the information of friend Tenny, I will give you my experience in raising them. My neighbors can testify to the quantity as well as quality of my squashes and other vegetables. Much depends upon the manner of planting squash seeds, as well as all other seeds, to ensure good crops. Every man's motto should be, "*work the soil deep*," and with the blessing of God, I shall have vegetables to sell and to keep. When I have planted my squash seeds after the following rule, I have never failed of being well paid for my labor, viz:—Dig the holes 16 or 18 inches deep, three feet broad and seven feet apart; throw the top soil on one side, and the bottom soil on the other side of the holes. After digging as many holes as I wish to plant hills, I return the top soil to the bottom of the holes, and then take one bushel or more of well pulverised manure, one peck leached ashes, &c. each hill, and with a spade or shovel mix well together from top to bottom. Then plant the seeds, leaving the top of the hills level with the surface of the ground, and keep them so during the season. When they are up, and the bugs have done troubling them, thin them out, leaving two or three stocks in each hill, which will cover the ground before the summer is ended. I intended to have said something about planting and raising other vegetables, but will leave that for another paper.

Yours truly,

ANSEL HOLMAN.

DR. PROUT has shewn that all our principal alimentary matters may be reduced to three classes: the saccharine, the oleaginous, and the albuminous, represent by butter, sugar and white of egg. Now, milk consists of all three—the curd which is chiefly albumen; the butter, chiefly oil; and a portion of sugar. Milk is the only substance prepared by nature so completely perfect as to be a compound of these principles, and therefore its perfection, mixed with bread, as a food for children.



DURHAM BULL, MARS.

Pedigree of full bred Durham Bull Mars.

Roan, calved 1st month, (January) 13th 1851 by "Montezuma," dam "Rose Bud" by "His Grace, gr. dam "Victoria" (purchased at Whittaker's second sale of short Horns from England 11th Mo. (November) 5th 1838, for \$520) by Luksall 2230 gr. gd. Red Rose, by Bedford, jr., (1701) gr. gr. gd. Moss Rose by Romulus (1403) gr. gr. gr. gd. Vesta by Isaac (1129) gr. gr. gr. gr. gd. by Northern Light, gr. gr. gr. gr. gd. by White Comet son of Comet 155.

Montezuma was bred by John Worth, near West Chester, got by "Yorkshireman," dam "Virginia" by "Henry Clay" gr. dam "Strawberry Girl" imported from England by Paschall Morris. "Yorkshireman" was purchased in England by Joseph Cope, of Thomas Bates, Kirkleavington, by whom he was bred, and whose stock now commands in England the highest prices. "His Grace the sire of "Rose Bud" was purchased by Paschall Morris, at Whittaker's second sale in 1838 for \$550. The opposite engraving by Clarkson is a very fair likeness of this superior young Bull, whose pedigree indicates some of the best blood now in the country. He is very good in the loin and hind quarter, and what in a southdown would be called the twist. The artist has succeeded very happily in catching the expression of countenance generally so difficult. His mild eye indicating gentleness of disposition, is a point on which we have always laid great stress. In the scale of points, originating with our friend F. Rotch of New York, and adopted, by the State Agricultural Society, it says: "The eye is of great significance, and should be prominent, bright and clear, "prominent" from an accumulation of "adepts" in the back part of its socket, which indicates a tendency to lay on fat: "bright" as an evidence of good disposition, "clear" as a guarantee of the animals health: whereas a dull sluggish eye belongs to a slow feeder, and a wild restless eye, betrays an unquiet, fitful temper." The whole scale of points for Durhams, Devons and other breeds was published in the May number of the *Farm Journal*, and is very useful for reference. Although probably no one individual has ever combined them *all*, yet in erecting such a *standard* for comparison, resulting as it did from the close observation and long experience, of our friend Rotch, and confirmed also by other eminent breeders, we think a good service has been rendered to the whole country. It is a scale which should be understood and studied by those about to purchase, and is the most, if not the only reliable written standard we have. "Mars though young, and not fully matured, yet comes well up in the "scale of points" already and when his form is fully developed, will embrace the most of them. His owner offers him for sale. Price \$500.

Montezuma the sire of Mars took the first premium, at the recent Chester county exhibition.

The Grape Culture in the West.

A condensed account for the Farm Journal.

The Grape crop in the Ohio Valley, "the Rhine of America," is unusually well ripened, juicy and sweet, this season. The vineyards are generally located on the slope of the Ohio River; and nine tenths of them are cultivated by Germans who have devoted their lives to the business,—each family taking charge of some fifteen or twenty acres, usually for one half the proceeds.

There are about fifteen hundred acres devoted to vine growing in Ohio; five hundred in Missouri; three hundred in Indiana; one hundred in Illinois; and the same in Kentucky. Some of the Vineyards will grow this year eight hundred gallons of Wine per acre. The fruit is purchased by the Wine manufacturers at from five to six dollars per hundred pounds; it is then washed and pressed, and the juice placed in wine vaults or cellars to undergo slow fermentation.

At the end of twenty months the "sparkling Catawba" is ready for market.

To give an idea of the extent of some of these wine cellars, it may be stated that Mr. Nicholas Longworth, has three, one of which will turn out annually fifty thousand bottles, another one hundred thousand, and a third an equal amount of "dry wine." Portions of the cellars are occupied by immense tanks, one of which holds five thousand gallons.

The American wines are of two general varieties, the "still" and the "sparkling." The first is wine that undergoes vinous fermentation, or the process which transforms the sugar of the grape into alcohol. To produce a sparkling wine, a second fermentation is excited, by adding a little "rock" candy, and the alcohol is transformed into carbonic acid gas. Thus, Western wine, can be relied on as the pure and unadulterated juice of the grape; and the substitution of it for the drugged liquors of foreign importation is a most important and desirable object to be gained. Even where the manufacture of pure wines is attempted in the hot countries of Europe, it is necessary to mix brandies with them to make them keep, which is not done here Americans are not yet prepared to properly appreciate the value of pure wines, because they so rarely find their way across the Atlantic. In the wine districts of Europe brutal intoxication is comparatively unknown, or any of the effects resulting from intemperate drinking. A drunken vine dresser is never seen.

In selecting a location for a vineyard a hill with a southern exposure and a dry calcareous soil, with a porous sub soil, is preferred. Wet or spongy lands are avoided. The cuttings should contain at least four joints, and be taken from wood well ripened; should be set out in a slanting position, with the top eye even with the surface of the ground, though covered with half an inch of light mould, if the weather is dry. Pruning is done from November to March,

and cuttings are preserved in cool cellars until the ground is warm and dry, or mellow. The first season's superfluous shoots are pulled off, leaving but one or two to grow, and but one eventually. In the spring the vine is cut down to a single eye, and one stalk or cane allowed to grow, tied to a stake,—no suckers being allowed to grow. The second spring after planting, cut down to two or three eyes, or joints, and the third year to four or five, pinching off laterals and tying up. This year, two stalks are trained to the stake, and some grapes will be produced. The vine is now established. The fourth pruning requires good judgment. The best shoot of the former year is cut down to six or eight joints, and fastened to the adjoining stake in a horizontal position, or bent over in the form of a bow, and tied to its own stake. The other stalk is cut down to two or three eyes, to make bearing wood for the next season.

The pioneer in this extending enterprise was Mr. Nicholas Longworth, now over seventy years of age. For thirty years he experimented with foreign grapes, with a view to their acclimation in the United States.

Six thousand vines of the best Madeira wine grapes, and seven thousand from the Mountains of Jura, in France, besides others from the vicinity of Paris and Bordeaux were procured, but which were all thrown away, after a protracted trial, being found inferior to the Catawba, a native. Near 200 varieties of grape have been tested, but the two best are found to be the Catawba and Herbemont. The latter makes a wine similar to the Spanish Manzanilla, and will be more extensively cultivated hereafter.

RECENT IMPROVEMENTS IN MACHINES FOR TILLING THE SOIL.—SPADING vs. PLOUGHING.—A very interesting paper on the above has recently been read before the British Association for the advancement of Science, by which it appears steam cultivators, digging machines, ploughing machines, drawn by stationary as well as locomotive steam engines, and rotary machines for pulverizing by means of forks' spades or claws, are being seriously talked of in England for general introduction in place of the ordinary plough and team.

It is objected to the plough, among other inconveniences, that while it loosens and reverses the top soil, it compresses the bottom of the furrow and damages the sub soil, which is pressed and hardened by the share. The new implements or diggers appear to be designed, not only to work deeper than the plough, but to thoroughly disintegrate and pulverize every particle of soil, thus leaving it in a condition, not only to draw nutriment from the atmosphere, but expedite the decomposition of the inorganic constituents of the soil, in fine to make a deep and perfect bed ready for the reception of the seed. It is contended that the new dynasty of steam has superseded the old one of the plough.

From experiments in England, it would seem not improbable these enormous steam diggers, may some day not distant, be found going around to dig, sub-soil and pulverize, at one operation, fields at a fixed price per acre, same as drilling, reaping, mowing and threshing machines are at present. As a matter of curiosity and information to our readers, we copy a description of one of these machines, which seems much approved of, and has answered well on *trial*.—The inventor says, "the forks of my digging machine are made of the best cast-steel that I can procure, of a square section, slightly tapered, bent on an angle and in pairs, at a cherry heat, and allowed to cool gradually. They are curved, so as to enter the ground easily, but to lift the soil as they come out. The upper portion of six such pairs being laid between two half discs of cast iron, grooved to receive them, the half discs being afterwards united by bolts, form a digging wheel of which the discs represent the boss, and the points of the forks the spokes; there is no hoop or tire. A number of these digging wheels (seven in a full sized machine) are hung on a bar, around which they rotate freely. Between each pair of wheels, and on the same bar is hung a ring which keeps them apart, and cleans the sides of the bosses. The frame containing the bar with the digging wheel also holds a number of cleaners, the ends of which scrape the soil from the circumference of the bosses, and force it from the prongs. This frame, to which the shafts and draught links for the horses are also attached, is itself hung in front on another bar, connecting two segmental frames, one on each side of the digging frame. These contain the wheels on which the implement rests when it is not in action, and which also serve to regulate the depth to which the forks of the digging frame are allowed to penetrate the ground. The segments (at the back of the travelling wheel frames) being toothed, two pinions gear into them, the place of which on the segments determine the height at which the digging frame is sustained; a winch attached to the latter works the pinions.

When the horses move forward the attendant throws out of gear a pawl, which hold the pinions at any given point; the digging frame runs down by its own weight, the prongs enter the ground, and the depth of their penetration is increased or diminished by turning the winch in opposite directions, thereby causing more or less weight to rest on the travelling and digging wheels respectively. Meanwhile the resistance offered by the earth in front of the prongs causes the latter to revolve and portions of the soil to be detached, which are thrown back, after having been lifted and broken by contact with the cleaning bars.

A full sized machine weighs a ton, and breaks up a depth not exceeding 10 inches, a breadth of 3 feet at a time, equal to that of four ploughs, and equiva-

lent to about five acres in seven hours. The draught required varies, according to the nature and state of the soil, from four to seven horses. A smaller implement is made for occupiers of land whose horse-power is limited, capable of working about 3 acres, in the same time, with three or four horses. About 30 digging machines, corresponding with the description which I have given, are at work in various parts of this country; one of them in this immediate neighborhood, on the estate of Mr. Robert Harrison, of Binningholme Hall."

The article, the author of which is Mr. Samuelson of Banbury, concludes thus:

"Whatever may be the success of all or any of the cultivating machines which I have brought under your notice, enough has certainly been done to demonstrate that we have entered upon a new epoch in the mechanics of tillage; and that, how long soever the dominion of the plough may be destined to last, it is not henceforth to reign alone. Meanwhile I was anxious to direct the attention of our machinist to a branch of their profession, than which none stands more in need of cultivation, and none will more amply repay it. We are dealing with a department of industry which, until lately, was oppressed with an excess of human labour, whilst the whole of its produce was liable to be depreciated far more than any other, in value, by a comparatively trifling increase in its amount. But now the tables are turned, the supply of agricultural labour diminishes daily, whilst consumption is extending beyond all precedent, and the cultivator of the soil looks eagerly to the mechanic to cheapen his operations, and, jointly with the chemist, to aid him in making two blades grow where one only grew before."

To Pickle Oysters.

Pour them into a cullender, and drain the liquor into a kettle; boil and skim it; then put in the oysters and let them come to a boil, previously rinsing them with cold water, which should be drained off; lift them out with a skimmer, and sprinkle with good vinegar to suit the taste; then cover to prevent their growing dark; strain the boiling liquor on a few cloves, allspice and mace; when cold pour it over the oysters, and keep them in a cold place; add salt if necessary.

Boston Gingerbread.

Three cups of flour, one cup of butter, one cup of molasses, two eggs, one table spoonful of dissolved saleratus, two large table spoonfuls of ginger, one table spoonful of cinnamon, milk enough to form a dough. Rub the butter and flour together, and add the other ingredients. Roll it out in sheets, cut thin, butter your tins, place them and wash the cake over with molasses and water before they are put in the oven. They require a very moderate heat to bake them, as they easily scorch.

Superior Washing Soap.

Dissolve one pound of soda and half a pound of hot lime in one gallon of boiling water; next dissolve one pound of sliced hard soap, in two quarts of boiling water; when cool mix them together. This forms a compound for washing linen, &c., superior to any of the washing fluids and patent soaps in use.

When the much dreaded "washing day" comes round, make a strong suds of this soap, and boil the clothes, previously soaked, for half an hour. Take out, drain well, pour boiling water on them, when they will be found to be clean, nothing more being required than to rinse well to free them from the remains of the suds.

Corn Pudding.

Take four dozen ears of corn, neither very young or very old, and grate them on an ordinary grate of a large size, then add a table spoonful of fine salt, and two table spoonfuls of fine sugar, add four eggs, beaten very light, and milk varying in quantity from half a pint to a pint, according to the age of the corn; bake in shallow dishes until quite brown, and eat hot with butter.

Lightened Pone.

Take half a gallon of corn meal, pour boiling water on one-third of it; mix it together with warm water till it is a thick batter, put in two table spoonfuls of boiling yeast, and one of salt; stir it well and set by the fire to raise; when it begins to open on the top, grease your pan and bake it.

Starching.

Take two ounces of fine white gum arabic, put it in a pitcher and pour on it one pint of boiling water, cover it and let it stand all night, in the morning pour it in a bottle and cork it; a table spoonful of it put in a pot of ordinary starch will improve it very much.

Maryland Corn Cakes.

Mix a pint of corn meal with rich milk, a little salt, and an egg; it should be well beaten with a spoon, and made thin enough to pour on the iron; bake in cakes the size of a breakfast plate, butter and send them hot to table.

To Preserve Tomatoes for Winter.

Take any quantity of tomatoes, scald them and take off the skin; put them in bottles and place them uncorked in a pot of hot water, and let them boil five or six hours; cork them while hot.

Worcester Loaf.

Three pints of flour, three eggs, one pint of Milk (warm) half pint of yeast, a quarter pound of butter. To rise three hours, and bake in a Turks cap, or other pan.

To Pickle Plums.

Half pound of sugar, half pint of vinegar, a few cloves to one pound of plums; put in the oven three times, on successive baking days.

WORK FOR THE MONTH.

Farm.

This, the eleventh month of the year, is the last generally for active, out of doors operations. The farmer who is in the habit of taking time by the forelock, and keeping ahead of his work, who knows the *true economy* of doing every thing in its right time, putting every thing in its proper place, and converting every thing to its proper use, will during this month have all his crops harvested and well secured, and be at leisure to make arrangements for the approaching winter. All implements not wanted should be carefully placed away under cover.—Cattle sheds and cow stabling should be examined and put in proper order this month. Provide for securing proper drainage. Collect leaves and have them convenient for use in stables or hog pens. Avoid commencing the winter with more stock than can be put through with safety and certainty. Nothing is more unprofitable than to be obliged to stint supplies of food. Animals should not only have enough to live on, but to thrive on.—Calves and young stock require extra shelter and good stabling. Every barnyard should also be provided with shedding, and a constant supply of water and rock salt. Fattening hogs should have all they want, but not wasteful and profuse feeding. A cattle card should always be at hand, and used at every opportunity. It greatly promotes thrift and health.

Haul and stack corn fodder convenient to the barn, so as to be cut up on barn floor by one of the improved corn stalk cutters and grinders. For experiments with this mode of using fodder, refer to the last volume, page 322.

Have a good supply of roots, sugar beets, carrots or turnips ready for milch cows, so soon as there is a failure in pasture. To keep them milking through winter the supply of succulent food should be commenced early and kept up. If they are allowed to fall off in their milk, for a time, there will be more difficulty afterwards.

Flower Gardens.

Orange and Lemon Trees, Pomegranates, Lagerstremias, Abuteilons and such half hardy ornamental shrubs, as have been standing out should now be taken up immediately, and placed in a dry cellar.—Oranges and Lemons should be placed where there is no danger of frost, and to prevent losing their leaves, should have plenty of light and free circulation of air in open weather. Should the leaves drop, they will not flower the next season. Lift and pot at once—Geraniums, Salvias, Heliotropes, and such other plants as are tenacious of frost. If taken up with care they will reward with bloom, through winter. Verbenas with good roots, if potted and placed in a warm room, where they will continue

growing, will keep flowering for some time, but for this purpose, it is much better that they should have been kept in pots through summer. Take up also, for blooming in parlor Mignonette, Neapolitan Violets, Sweet Alyssum, Stock Gillies and Chinese Primrose. If the ground is very dry, water well before lifting, so as to have some earth adhering to the roots. All freshly potted plants, should for a few days be kept closely shaded.

Cut down and carry away, all such plants as have been hurt by frost. As soon as Dahlia tops are killed, lift the roots, cutting off within a few inches of the ground. Dry them a short time in the sun, remove carefully, the earth which adheres, then invert them for a few days, with tops down to drain off moisture, after which they may be removed to their winter quarters, which may be on a shelf in a dry cellar, free from frost, or they may be packed in dry sand.

Lift all tender Bulbs, Tuberoses, Gladiolus, Tiger flowers, Amaryllis, &c., and lay away as Dahlias in a dry place. If not already done, plant beds of Tulips and Hyacinths. Trench a piece of ground, enriching well with short manure. Plant the Bulbs nine inches apart, and three inches deep. When hard weather approaches, cover with long litter or leaves. Now is a good time to divide and replant Herbaceous plants, Peonies, &c. Put out seedling Hollyhocks where they are to bloom. Lift Carnations and Pinks which have been layered, and place in a cool frame for the winter. Water occasionally, and give fresh air in mild days. Chrysanthemums if taken up carefully and potted in large pots and well watered, may be retained in bloom for a considerable time in the house. The Lilliputian or dwarf varieties which are generally much later than the others, should be taken up at once and potted. They bloom much finer in the house. Water occasionally with Guano water, or liquid manure, to increase the size of flowers. One pound of Guano, to five gallons of water, is a suitable strength.

Take up roses for early spring blooming; We recommend for this, Pink Dailies, and most of the Bengals, Tea Cels, Devonensis, Souvenir de Malmaison and Hermosa.

To make an attractive display of flowers in-doors, early in spring, when they will be most highly valued, take up and place in large pots, Wiegelia rosea, Persian Lilacs, Spirea Reevesii, Prunifolia, and Forsythia Viridissima. Our native Kalmia Latifolia is much esteemed in England, for early spring forcing in pots. Hardy annual seeds, such as dwarf German Larkspurs, purple and white Candytufts, Collinsia Bicolor, ditto Verna, Clarkia Grandiflora, and Elegans—Gillia Tricolor, should have been sown last month, but if the weather keeps open, may still do on a warm rich border; cover up with leaves on approach of severe weather.

For potting earth, mix well decayed sods, with short manure, equal parts of each. Plants in windows should be turned around once a week, to prevent growing one sided. Timely hints will be given how to treat plants through winter.

VEGETABLE GARDEN.—Dig or plough up ground for next years crop, trenching with spade or subsoil plow. The exposure to frost and alternate freezing and thawing, mellow the soil and destroys weeds and insects. Cut off Asparagus tops close to the ground, and clear out thoroughly, all weeds. Spread manure over the bed three inches deep, covering slightly with earth from the alleys. These should also be manured, the whole to be forked in and spaded in spring. Take up and secure before severe frosts, Beets, Carrots, Salsify, Turnips, &c. Place them in moderate sized heaps out of doors, covering first with straw, and then with a few inches of earth, or if cellar room is convenient, they may be placed in barrels or casks, mixing earth through them and covering with sods. Have shutters or straw mats at hand for covering cold frames of Cabbages, Cauliflowers, &c. These should be insured to cold, by exposing in moderate weather, covering only at nights. Give air to forcing frames to prevent plants from drawing. Take up Cabbages, arranging them in beds, and burying roots and lower leaves in earth; cover with boards, straw or cornfodder on approach of severe weather. Dig up Celery, and for winter use, place in beds, planting the first row against a ridge, then fill in earth nearly to the top, then another row of Celery, leaving four or five inches of earth between each row. Cover the out side row with straw or manure, and a good covering of straw or cornfodder over the top. Manure Rhubarb beds with a heavy coat, both on plants and in alle which should be dug in the latter; cover with straw, litter or cedar brush, &c.—Lettuce, Spinach, Corn Salad and Parsley. Take up Horse Radish, and lay away in sand or earth for winter use. Dig up Parsnips for early consumption, and place in barrels, covering with sod. Collect and preserve Pea sticks, Bean poles, &c. Gather up Cabbage stumps and all other rubbish, and haul to the manure heap.

Short Directions for Planting Trees.

Remove all bruised or injured roots, by cutting them from the under side with a sharp knife. Dig the holes at least twice as large as the roots extend, so as to allow them easy access in their starting to the loose earth, which should be finely pulverized; when the hole is half filled, pour in a few gallons of water, which has a tendency to settle the earth and fill up vacancies. Be careful to avoid lifting the tree up, while filling in, which tends to give the roots a vertical and unnatural position. Let the soil in contact with the roots be the surface soil first thrown out, or rich loam, obtained expressly, would be better.—

Leaf mould, from the woods, is excellent. Let no manure be put into the hole, around the root, which is apt to induce decay. If any is applied, let it be on the surface, to be carried down by rains. The fall of the year is a suitable time for surface manuring around trees. Let the trees be well staked and tied up, to prevent being shaken or disturbed by the winds. After culture and periodical judicious pruning are also important. As a general rule, orchards should be kept ploughed and cultivated to insure fine fruit and good crops. Where this is not practicable, trees should be dug round and kept free from grass and weeds. Avoid especially *deep* planting; when the earth settles, the tree should be about the same depth as before removal.

Mulching all trees the first season they are transplanted, by covering the ground around, two or three feet each way, with grass or coarse hay, litter, &c., is very important to secure success. It preserves an even temperature in the soil, keeps it damp, and prevents, to some extent, damage from sudden changes of weather.

Pennsylvania Pears.

We are pleased to observe some of our Pennsylvania seedling fruits have proved well, even so far north as Boston, and are properly appreciated, notwithstanding their origin *south* of New York. The last number of Hovey's Magazine contains engraved outlines with commendatory notices of five of our Pennsylvania seedlings, which have been fruited there viz: Brandywine, Petre, Kingessing, Ott and Seckle. Of the Brandywine, which originated a few miles from West Chester where the tree is now growing, the editor says, "the qualities of the Brandywine are peculiarly its own, and cannot be compared with any other variety. Its flesh is slightly firm, yet perfectly melting, and its flavor, without being highly perfumed, appears to be a concentration of that of several sorts, being almost as sugary as the seckle, yet relieved by the refreshing aroma of the Marie Louise, and the champagne smack of the D'Aremberg. It is as distinct in character as the seckle."

To Prevent Mice and Rabbits from Barking Trees.

An article has been going the rounds of the papers, copied we believe originally from "Dickens's Household Words," of a horse who was accustomed to barking any tree he was tied to, and who on commencing operations on one, which had previously been washed with tobacco juice, flew back with such violence, as almost to break his halter. As this weed is known to be exceedingly offensive to every animal but one, it has occurred to us if it might not be effectually applied in the same way, to protect trees from Mice and Rabbits, by washing the trunks with it near the ground. It is worth at least a trial.

BOOK NOTICES.

SCIENTIFIC AMERICAN.—The ninth volume of this standard periodical commenced on the first of September. It is issued weekly, each volume containing several hundred engravings and over 400 pages of reading matter. All the valuable patents which issue weekly from the patent office are illustrated in it.—Price only \$2 per year. It would be difficult to overrate the able manner in which this paper is conducted. Its editor seems resolutely opposed to all humbug, and has courage enough to stem the tide of the popular current when taking a wrong direction, as in the case of the calorific engine, which it brought down at once to the level of what public opinion only now concedes to it. In its notice of new patents and inventions, we have admired its course as ready to give censure as praise, where it rightly belongs.—We will with pleasure act as agents for any of our friends who wish to subscribe.

LANDSCAPE GARDENING, PARKS AND PLEASURE GROUNDS BY CHARLES H. SMITH, WITH NOTES AND ADDITIONS BY LEWIS F. ALLEN. Price \$1.25.—This is an American edition of an English work, whose author has had an experience of eighteen years, as a professional Landscape Gardener. The American editor has made it more adapted to our own soil and climate. It treats the subject (to which too little attention has been paid here) under its various divisions, such as the arrangement of buildings, the approach, laying out pleasure grounds and flower gardens, also kitchen and fruit gardens, construction of artificial lakes or ponds, fences, public parks, &c., and finally the Arboretum and Pinetum, with an arrangement according to the natural system. We give in another column an extract on planting and transplanting evergreens. It is well worth purchasing for those about to locate new lawns or re-arrange old ones.

ELEMENTS OF AGRICULTURAL CHEMISTRY AND GEOLOGY BY JAMES F. W. JOHNSTON, with a complete index and American preface by Simon Brown, editor of the New England Farmer. This is condensed from the larger work, "Lectures on Agricultural Chemistry and Geology, by the same author," so favorably known here and in Europe as a profound, no less than truly practical writer on these subjects. The present work should be in the possession of every farmer, and is perhaps in a more useful form than the larger, and more strictly scientific one from which it is condensed. The information it contains is indispensable to every one who wishes to pursue the cultivation of the soil *understandingly*, that is with a knowledge of the principles on which all successful practices must be based. To give some idea of its practical character we quote below portions of a chapter on Guano. It is published by Saxton, and can be had at the agricultural warehouses and book-

stores in Philadelphia. Price \$1.00. We take the following extract from its pages:

1. *Adulteration of guano.*—In consequence of the high price of guano, the great demand for it, and the ease with which the unwary farmer may be imposed upon, guano is adulterated with various substances, and to a great extent.—Impositions even have been practised by selling as genuine guano artificial mixtures, made to look so like guano that the practical man in remote districts is unable to detect it. A sample of such pretended guano, which had been sold in the neighborhood of Wigtown, and had been found to produce no effect upon the crops, when examined in my laboratory, was found to contain, in the state in which it was sold, more than half its weight in gypsum—the rest being peat or coal ashes, with a little common salt, sulphate of ammonia, and either dried urine or the refuse of the glue manufactories, to give it a smell. I could not satisfy myself that it contained a particle of real guano. Burnt earth and brick-dust are now prepared of various shades, and in fine powder, in special manufactories, for the purpose of mixing with guano and with artificial manures. These facts show how important it is that the farmer should possess some means of readily, and at a cheap rate, testing the costly manures he employs.*

2. *In selecting a good guano,* the following simple observations will aid the practical man:

a. The drier the better—there is less water to pay for and to transport.

b. The lighter the color, the better also. It is the less completely decomposed.

c. If it has not a strong ammoniacal smell, it ought to give off such a smell when a spoonful of it is mixed with a spoonful of slaked lime in a wine glass.

d. When put into a tumbler with water, stirred well about, and the water and fine matter poured off, it ought to leave little sand or stones.

e. When heated to redness in the air till all the animal matter is burned away, the ash should nearly all dissolve in dilute muriatic acid. The insoluble matter is useless sand or earthy adulterations.

f. In looking at the numbers in a published analysis of a Peruvian guano, those representing the water should be small; the organic matter containing ammonia should approach to 50 or 60 per cent.; the phosphates should not much exceed 20 per cent.; and the common salt and sulphate of soda ought not to form much more than 5 or 6 per cent. of the weight of the guano. In Saldanha Bay guano the proportion of phosphates was much greater, and of organic matter less.

3. *The national value of guano,* and the consequent importance of preventing adulteration as far as possible, may be judged of from three important facts:

a. From the amount of the importation of it into this country, which, during the last ten years, has been as follows:—

Years.	Tons.	Years.	Tons.
1841,	2,881	1847,	82,000
1842,	20,398	1848,	71,414
1843,	3,002	1849,	83,438
1844,	104,351	1850,	116,925
1845,	283,300	1851,	245,016
1846,	89,203		

b. That the quantity imported in 1851 would sell for upwards of two millions sterling, and with good management ought to produce two or three times its own value in grain or vegetable food. In other words such a yearly supply of guano is equal to the impor-

tation of foreign grain and other produce to the value of from four to six millions sterling.

c. It also serves as a stimulus, while it supplies one of the requisites, to the general introduction of improved methods of agricultural practice.

*Four vessels recently sailed hence for guano stations ballasted with gypsum, or plaster of Paris. This substance is intended for admixture with guano, and will enable the parties to deliver from the vessel a nice-looking and light colored article. Parties purchasing guano are very desirous of having it delivered from the vessel, as they believe they obtain it pure. The favorite material for adulteration of guano, at the present moment, is timber, which is brought from Anglessea in large quantities. The rate of admixture, we are informed, is about 15 cwt. of timber to about 5 cwt. of Peruvian guano, from which an excellent looking article, called African guano, is manufactured.—*Liverpool paper.*

Management of FAT STOCK by the Butcher before being Slaughtered.

As the practice of selling fat cattle, by their *live* weight deducting a certain per centage for loss, in offal, is becoming very general among our feeders, we copy the following article from the English Agricultural Gazette, which contains some valuable hints, no less for the Farmer than the Butcher and consumer. The supply of *healthy* meat, to a population like that of Philadelphia, is of great importance, and depends very much on the treatment cattle are subjected to in the drove yards, immediately before going into the hands of the Butcher. The account in our last number of the *abuses* of the cattle yard in New York, should arrest the attention of city authorities. The inspection of meat now we believe, extends only to its exhibition in the shambles. What is positively offensive, and in a state of decomposition, is condemned by the inspectors, and would be rejected without them. But there is reason to believe, a large amount of unwholesome meat, is in that condition *before* being slaughtered, and no doubt is the unknown cause of disease. The inspection to be thorough and effectual, should extend to the drove yards, no less than to the shambles. In travelling over England and Scotland, for some 3 or 4 months, (and we have heard of similar remarks by others) we do not recollect of meeting on either public or private tables, with tough or stringy beef or mutton. Although we have occasionally in our country as fine, tender meat, as is ever seen there, it is not of that *invariably* good character. There is *more, much more* of a different kind met with here, than there is in England. The reason we have no doubt, is owing to a better understanding there, of the scientific rationale of feeding and fattening, and *after management*.

The feeding and management of FAT STOCK immediately prior to being slaughtered, it is a subject quite as interesting to the farmer as to the butcher; for if the whole weight which left the feeding-box, were placed in the scales, the former would be a gainer by the difference between this weight and that of the carcass when slaughtered—the actual weight which the latter now pays for. There are two very important practical questions involved in this subject. The one relates to the daily amount of waste which takes place under the various modes of management during marketing from the time stock leaves home until led to the slaughter-house; and the other re-

lates to the quantity and quality of food which ought to be consumed during that period.

What, for instance, is the daily waste upon an ox of 100 imperial stones, carcass weight, when sent to the metropolis, between the time it leaves home until slaughtered, and what the quantity and quality of food which such an ox ought to consume, and the treatment it should otherwise receive, so as to maintain it at this weight undeteriorated in quality? The amount of daily waste will depend very much upon the constitution of the animal, the state of the weather, food and treatment prior to leaving home, as well as upon the food and treatment between home and the shambles, consequently, from the diversity of constitution, food and treatment, there may scarcely be two animals in Smithfield of this weight, whose daily waste is equal. A five-year-old Highlander or Galloway, for instance, accustomed to exercise, exposure, and inferior food, may lose little more, comparatively speaking, than the ordinary daily waste in the straw yard, prior to leaving home; and this to a certain amount may be repaired by the quantity of hay consumed—a species of food somewhat better than many of this class are yet accustomed to at home, while on the other hand, the quickly grown short horn or Hereford, accustomed to better food and treatment, and which has attained to this weight by the time it has completed its second year, will be in a very different position, for at this age their bones will be comparatively green, their hoofs soft and tender, and their whole system in an artificial state, demanding treatment very different from that which they generally receive. In two examples of this kind the latter may lose weight at the rate of 2 imperial stones daily, while the former may not exceed 1. And differences almost as great may exist in this respect between individuals of any one breed. Some short horns, for instance, of the best symmetry, are very active and hardy, and easily satisfied as to quality of food; and, therefore, the daily waste upon them may not be the half of what it is in others of the same breed possessing inferior constitution; and the same will be found true of Herefords, Devons, Galloways, &c.

The food and treatment of the ox between the stall and the shambles is a more complex question, being surrounded by many more difficulties, than that of daily waste. As a general rule it may be laid down that the ox should receive the same species of food after it leaves home, until within 12 hours of being slaughtered, that it has been accustomed to; and that where Turnips, oilcake, &c., are given—articles which affect the quality of the butcher-meat when slaughtered—these should be changed before leaving home, and others, such as bruised oats or other corn, substituted in their place; also that *treatment* after leaving home should be as similar to treatment before it as possible.

The *rationale* of this practice is sufficiently obvious. It is that which is endeavored to be carried out at all our great cattle shows, and the difficulty there experienced is to get cattle to consume a sufficiency of food. Pampered nature overloaded with fat, ever active to meet the exigencies of her situation, feels rather disposed to throw off the burden than maintain it at so overpowering a weight, and the same laws will regulate her conduct between the feeding-box of the farmer and the slaughter-house of the butcher. The progress lately made amongst farmers in the art of feeding, both as regards food and household accommodation, and the early maturity of breeds and the change in our commercial policy affording

an ample supply of cheap corn to butchers, enable both parties to adopt the best policy which science and experience can dictate. And they should endeavor to act in accordance with one another's interest; for if the farmer, for instance, feeds his ox on the full allowance of Turnips and oilcake up to the hour it leaves for market, as is too frequently the case, it may often be impossible for the drover, salesman, and butcher, to introduce the necessary change so as to present to the public butcher-meat undeteriorated in quality. For a few days, for instance, before the ox leaves home it should be fed purposely with a view of improving the quality of its flesh; for it is a well known fact that turnips, oilcake, and several other articles contain elements which, being readily absorbed into the system, tend to deteriorate the quality of the meat.

OHIO DRESSED MEATS IN NEW YORK IN AUGUST.—We dined yesterday upon as fine a quarter of lamb as we ever tasted, which was butchered in Columbus, Ohio, and brought here in a refrigerator can, by railroad, and we expect to dine to-morrow upon a pair of fine fowls, as sweet as though dressed to-day, which came in the same way. If any of our readers desire to satisfy themselves that our meats may be all butchered in Ohio and sent to us in perfect order, they can do so by calling upon D. TILTON, No. 8 Washington Market, who furnished us with the above specimens. We are glad to chronicle this event, though not a very new one, as large quantities of game have been sent here from the West in the same way, because it proves how easy the thing can be done, and how much better it would be to have our meats brought ready dressed from the country, thus saving the abominable nuisances of bull-fights and cow-chases in the streets, and gutters of gore among the dwellings of women and children. Success to the enterprise. If those who are engaged in the enterprise will give us the reports we will publish every arrival.—*New York Tribune, August 31.*

The above article from the New York Tribune, is a striking illustration, of the changes from the use of steam, in the condition of the country compared with twenty years ago. Space is now measured by time, and by the aid of refrigerator cars, provisions already prepared for the cook on the seaboard, can be safely transported from 1000 miles in the interior. The future President of the United States, who is now said to be "running barefoot among the huckleberry bushes of Oregon," may ere long be able to bring his berries to the Atlantic coast fresh as picked on a pleasant market trip of a few days, and peddle them along the streets of New York and Philadelphia, thus giving the good people in those two cities, an opportunity to see him.

It is difficult to make any calculations as to the course of trade in the present age of wonders, but it would not be extraordinary if the plan for slaughtering and dressing meats, far in the interior, thus avoiding the expense of transporting so much offal, should be found cheaper than bringing the live animals. In ice houses on vessels, fresh provisions, are kept safe for many weeks, and ice cars or refrigerators, could readily be constructed for transporting

poultry, fresh meat choice fruits, game, &c., on a large scale.

For the Farm Journal.

PROFESSOR LIEBIG.

MR. EDITOR:—

I have no doubt but that it will be considered the height of presumption in a plain farmer, to attempt to criticise the writings of such a man as Liebig. But as a poor mechanic was permitted to criticise the work of the greatest artist of Greece, I also may be tolerated in objecting to what every practical farmer knows to be wrong in the theories of Liebig, provided, that like the shoemaker of Athens, I stick to my last.

Liebig may be a great chemist, but for the want of a practical knowledge of agriculture, he has made the most glaring mistakes, and, if followed, would have caused farmers more loss than multicaulis, Rohan potatoes, and Chilian guano united.

For the purpose of showing what a Yankee chemist thinks of Liebig's theories, I should be much pleased if you would re-publish Professor Norton's communication, which you will find in the Patent Office Report for 1851, page 7; as in my humble opinion it contains more common sense, and practical knowledge, than any thing previously written by agricultural chemists in Europe or America.

I should not have called your attention to this subject at present, but for the very high terms in which Dr. Emerson spoke of Liebig, in his address to the farmers of this county, at our agricultural exhibition, last September. I should not have been surprised at such praise from a mere theorist, but from a practical man, like the Doctor, I must confess it did surprise me.

It ought not to discourage agricultural chemists to be told, that so far they have been of no pecuniary advantage to farmers. Even Dr. Emerson admits that the Belgians and Chinese make land produce the heaviest crops the world has ever seen, and they certainly know less of chemistry, and in fact use less mineral manure than farmers generally do, either in this country or Europe.

Agricultural chemistry may be compared to a tree that is planted, has grown, and may have blossomed, but as yet has born no fruit. But I hope to see the day, when much that farmers have discovered, by groping in the dark, and much yet to be discovered, will be made as plain as noon-day, by the aid of chemistry. But so far it has been our own experience, and the experience of others, as given in agricultural publications, that has given us our strongest light.

It was seeing what others are doing, that brought the turnip husbandry from the continent to England and guano from Peru to the United States; introduced plaster, lime, bone dust, under draining, subsoiling, rotation of crops, &c., &c.

It is the practical success and example of such men as Messrs. Dickeys, of this country, and "a few more of the same sort," (as the razor strop man would say,) that we are drawing the most benefit from at present. V. W. I.

We cheerfully comply with our correspondent's suggestion. The following is the communication alluded to.

ANALYTICAL LABORATORY, YALE COLLEGE,
New Haven, Connecticut, Oct. 24, 1851.

EDS. OF CULTIVATOR:—The subject which I have placed at the head of this letter is not one which can be fully discussed in a single page of your journal; and yet it is one of so much importance, that I desire to make a few explanations and statements regarding the shape which it has now assumed among scientific men. When I mention the "mineral manure theory," I speak of that view of manures which ascribes all, or nearly all, of their efficacy to their mineral constituents. The principal supporter, and, indeed, the originator, of the theory, is Professor Liebig. This distinguished chemist, distinguished no less by his clear and lucid style than by his high scientific reputation, was for a time devoted to the "ammonia theory," excluding those mineral manures to which he now attaches so much importance. A few years since, however, he saw cause to change his ground, and has since held that, if we furnish mineral manures in abundance, plants will, without doubt, always obtain their ammonia, or rather nitrogen, from the atmosphere of the soil.

In pursuance of this idea, he went so far as to compound, after a careful study of ash analysis, specific mineral manures for wheat, rye, oats, turnips, &c., which were to take effect upon all soils in a proper physical condition. The failure of these specific manures, which were patented in England, was, as many of your readers are aware, very decisive. I had supposed the subject rather at rest, but find that, in the last edition of Professor Liebig's "Letters on Chemistry," published so late as the commencement of the present year, he reiterates his former views on this subject in a most decisive manner, and prophesies that our future agriculture will depend upon them, however much we may distrust and disbelieve them now. I have also had occasion to observe quite recently that some gentlemen of high standing among our scientific men follow Liebig in this as well as in other theories. For these reasons I have thought it best to express my own opinions on this contested point, in order that our farmers may be aware that all chemists do not hold to views which militate almost directly against the ordinary results of practice.

My belief was that, when Professor Liebig advocated the "ammonia theory," he was nearer right than he is now, when he only admits the necessity of mineral manure; not that he was right then, but that better results would, in most cases, be obtained by the farmer in the use of ammoniacal or nitrogenous manures alone than by the use of mineral manures alone. We find land in all parts of the country where strictly mineral applications, such as lime, plaster, marl, &c., fail to produce any marked effect; but if upon any of our fields we apply guano, or sulphate, or carbonate of ammonia, the character of the vegetation is at once changed, its color alters, its luxuriance and vigor increase, and in a great

majority of cases the product is augmented. Every farmer who has observed matters intelligently knows that the above statements are correct; indeed, they have been so far applied in practice, that the quantity of ammonia which any manure contains is taken as the highest standard of its value. A guano, for instance, with the usual per centage of ammonia, will bring twice as much as one which contains little ammonia, even though this deficiency is replaced by the most valuable possible mineral constituents. I must not be understood to say that mineral manures are not valuable; on the contrary, I have the highest opinion of them, and recommend their application in almost all cases where my advice is asked. The mineral constituents of the plant are no less indispensable than its organic part, and if one or two of them are absent from the soil, the plant will not flourish. There are many instances of these special deficiencies, which special mineral manures alone will supply, and there are certain mineral substances which have been found especially valuable. The most valuable of all these is phosphoric acid. Now, the phosphates—that is, the compounds of this acid—are not more necessary to the plant than are the alkalis, but the supply is far more apt to be scanty; and this—not its intrinsic importance to the plant—is the cause of its higher value to the farmer. The same principle applies when we say that nitrogenous manures, of which ammonia is the most common form, are more valuable than others known in agriculture. They are volatile, easily decomposable, and very soluble; for all of these reasons, they are extremely apt to disappear most rapidly. These manures, then, are worth more to the farmer than any others, because they are most likely to be needed, and because their scarcity renders it somewhat difficult to obtain a good supply.

I make these statements fearlessly and confidently, although against so high an authority as Liebig. I should not presume to differ from him on mere theoretical grounds, but I feel that I am here sustained by almost uniform practical results. It must be acknowledged that we have occasional instances reported of plants grown upon soils nearly or quite destitute of vegetable matter; but in most of these that have fallen under my observation, the fact of the entire absence of vegetable, and particularly of nitrogenous matter, has not been sufficiently established. The information that they give is neither entirely definite, nor well enough made out, by continuous and careful experiments, to be set off against an array of facts brought forward in favor of the opposite view. Single experiments, for a single year, must always be looked upon with distrust until amply verified; and it is by mainly trusting to such, so far as we are informed, that the exclusive mineral theory has been built up. The laboratory alone is pretty sure to go wrong when it attempts to prescribe rules for practice. The chemist must go into the field and study actual experience if he would serve the farmer effectually. It has been my intention to experiment somewhat largely upon this particular subject; but in the last number of the Journal of the Royal Agricultural Society of England is a paper of Messrs. Lawes and Gilbert, that almost precludes the necessity of doing any thing more. These gentlemen have been experimenting on a large scale for the last ten years, and their results are clearly and admirably set forth. They took a field at the close of a four years' rotation, when the manures added at the commencement of the course

were exhausted. On this ground they have cultivated wheat for ten years under various conditions. One plot remained unmanured, and the produce of this served as a standard and a starting point for comparison during the whole period. Thus, if its yield in 1845 was seventeen bushels per acre, the improvement over this in an adjoining plot, otherwise the same, was set down to the advantage of whatever manure had been employed. Such a system of cropping, continued for so long a time, obviously affords results that are worthy of much confidence. The first year's comparative practice was made with various approved mineral manures alone. It was found that, even by the addition of large quantities of these, the increase of product over the unmanured plot was but trifling. In the next year the same character of mineral manures were employed, but with the addition in several cases of ammoniacal or nitrogenous substances. In all of these the effect was quite marked, the yield increasing to ten, twelve, and fourteen bushels, above the unmanured plot. This, in short, was the character of all the results; sometimes ammoniacal manures alone were added, and then the increase was several times more than by mineral manures alone. One experiment was very striking: four hundred weight per acre of Liebig's special mineral manure, for wheat, was applied to a plot, and produced an increase of but about two or three bushels upon this same plot in the next year. A purely ammoniacal manure gave an increase of ten or twelve bushels. To make the experiment still more conclusive, no manure was added to this plot for the next crop, and the yield then fell again almost to the original standard.

These trials seem to me perfectly conclusive in this matter, so far as wheat is concerned; they prove that ammoniacal manures increase its growth far more than mineral manures, where both are already present in moderate supply, and that the addition of any amount of the latter will do little good unless the former be also present. These views are still further sustained by a very able paper in one of the late French scientific journals. The experiments in this case were made upon oats, and were between forty and fifty in number. They commenced by growing them out in sand, first deprived of every thing soluble by acid, and then burned to draw off all vegetable matter. In this, as might have been expected, no perfect plants were produced. One mineral substance after another was added, until at last it was found that, with a certain series of them, the plant flourished better than with any others. It, however, was still far from luxuriant, or from yielding a fair amount of grain. It was not until some manures containing nitrogen had also been added that entirely healthy, fertile, and strong plants were obtained. These experiments appear to have been very carefully conducted, and furnish important conformation to those of Messrs. Lawes and Gilbert.

There are other questions involved in these experiments, which for want of space cannot be discussed here. The main point is, I think, fully established. The farmer may supply special deficiencies by special mineral manures, and should aim to keep up the supply of mineral substances in the soil; but he cannot render it fertile, and continue it so, with them alone; he must also supply nitrogen in some form, and will find it in a great majority of cases the most important and efficacious of all fertilizers. In despite of *theoretical* views to the contra-

ry, he will find that, in *practice*, he can best afford to give a high price for those manures—especially, that are rich in ammonia or some other compound of nitrogen.

Yours, very truly,

JOHN P. NORTON,

Japan Pea.

MESSRS. EDITORS:—

The "interesting correspondence relating to the Japan Pea" copied in the March No. of your Journal was, no doubt, read with interest by many, and excited some curiosity. An account of its successful culture in our county, and an offer of seed may also prove acceptable.

The distinguished and liberal Horticulturist of Spring Garden, former President of the Cincinnati Horticultural Society—kindly sent me by mail, two pods, each containing three of said peas; with directions, to plant one foot apart. They were so planted, all grew, and the product is now gathered, having matured perfectly.

One stalk, 3 feet high and 23 feet in circumference near the ground, produced 741 pods, (3 quarts by measurement,) most of which contained only two seeds each.

To interested friends of horticulture seed will be furnished upon application. For a full description of its introduction, growth, appearance and botanical history, reference may be had to the correspondence alluded to above.

From personal experience nothing can be said of its edible properties, but a former resident of Lisbon who has seen it here, speaks in terms of praise of its superior qualities for table use in Portugal.

J. K. ESHELMAN.

Glenisle, Oct. 1st, 1853.

Foot Rot in Sheep.

We observe in one of our foreign exchanges, "patent gutta Percha Boots," have been invented, for use in this very troublesome and contagious disease, among sheep. They keep the feet dry and warm, upon cold wet land, prevent contagion, and are said to entirely cure the rot. The remedy is highly recommended by the Yorkshire agricultural society.

AGE OF SHEEP—HOW DETERMINED.—The age of sheep may be known by the front teeth. They are eight in number, and appear all of a size. In the second year the two middle ones fall out, and their place is supplied by two large ones. In the third year, a small tooth on each side. In the fourth year, the large teeth are six in number. In the fifth year the whole front teeth are large. In the sixth year, the whole begin to get worn. In the seventh year, the whole fall out, or are broken. It is said that the teeth of the ewes begin to decay at five or six, those of weathers at seven.

Let no man be ashamed of doing whatever is necessary in his situation.

Producers and Consumers.

Whatever may be thought about the expediency of the almost numberless *parties* into which the people of the United States are divided, particularly of our friends in the great state of New York, there are at last but two *really great parties* in this country, and it is with these only that a Farm Journal has anything to do, viz: producers and consumers. A visitor in Philadelphia, on either of the two principal market days in the week, upon seeing the miles of produce, fish, flesh, fowl and vegetable, &c., in every conceivable variety, along the great thoroughfares, would almost wonder how they could be all absorbed and the farmers be able to bend homeward with empty wagons. We copy below a few statistics of the consumption of a single *one* out of the many hotels in New York, which will give some idea of the way provisions are made to vanish, and which we think will be interesting to our readers. We take it from the New York Herald and the hotel alluded is the "Metropolitan." It says:

"There is one continual round of feasting from morning till night, or rather from morning till morning again. The first breakfast table is spread at five o'clock in the morning, and until 1 o'clock the next morning the different meals are served; at every hour of the day or night, the travellers arriving or departing can supply the inner man with every luxury the markets afford. The frequent arrivals and departures of trains and steamers makes this indispensable. The consumption of solids and liquids at this establishment, during the year ending September 1, 1853, shows that the proprietors must have had a small army to provide for. It also shows that they have given them all the luxuries, as well as the necessities of life. The commissary department of the Metropolitan is a very important one. Among the leading articles of consumption we notice:

Beef, 418,000 lbs., lamb and mutton, 3,500 head; veal, 150 head; fish and lobster, 110,000 lbs.; oysters and clams, 626,000; poultry and game, 171,000 head; ham and pork, 91,000 lbs.; eggs, 780,000; milk and cream, 204,000 quarts; flour and corn meal, 2,000 bbls.; fruits and vegetables, value, \$20,000; brandy and other liquors, 6,322 gallons; champagne, 21,160 bottles; sherry, Madeira, &c., 22,912 bottles; claret and white wines, 18,942 bottles. This is independent of malt liquors, cordials, cooking wines, &c. The beef consumed last year in this house required a drove of one thousand head to supply. When we consider that this number was required for one hotel in this city, we can form a pretty good idea of the immense herds it must require to supply such a population as New York contains. This, undoubtedly, will astonish the Vegetarian Society, and perhaps provide more effective arguments in favor of cabbage heads and cold slaughter. The enumeration of these items, although comprising but a small portion of the articles consumed shows that the annual expenditures must be immense, and that large receipts are necessary to furnish means to meet such an outlay. This luxury and extravagance cannot be supported without great cost, and the guests who pay bills with alarming totals, must not suppose for a moment that it all goes into the proprietors' pocket.

The gross cash receipts of the Metropolitan Hotel for the year ending September 1, 1853, were \$500,-

000, of which about 20 per cent. were profits. This is independent of wear and tear, which is by no means a small item, particularly with such splendid and expensive furniture and appointments. The cost of heating the house and the gas consumed, during the year, was \$14,000. Croton water rent, \$1,000. Six stages and 20 carriages are constantly employed in transporting passengers to and from the hotel.—During the year several public dinners were given at this house, the last of which was the Crystal Palace banquet. Two splendid balls were given, one by the proprietors and one by the guests, besides this a hop has been given on Wednesday evening of each week throughout the dancing season. It requires men with talents of no ordinary character, and pockets of no ordinary depth, to put into operation and carry out successfully, such an immense establishment, and we are glad to learn that the Messrs. Leland, in every particular, have realized their most sanguine anticipations. Their house is literally the Metropolitan of the metropolis. The Crystal Palace and other attractions in New York have drawn thousands of strangers to the city, and all the hotels, both great and small, have been crowded, and the proprietors have been coining money."

Great Discovery in Tanning Leather.

In our September number, we gave some account of a new process of tanning leather, discovered by a Mr. Preller. Like all very extraordinary events, it was received no doubt with a good deal of incredulity, but in a late number of the London Gardener's Chronicle, we see it has been pretty fully tested, and promises to be a highly valuable process. The editor of the Chronicle expresses the opinion, it will have a serious effect on the owners of woodland property in Great Britain, by depreciating the price of bark. It says:

"This method of treatment is so remarkable for its originality, and attended with such excellent advantages in the course of manufacture, and in the character of the produced article with reference to the requirements of practice, as to promise nothing short of a complete revolution in the arts of the tanner, and the establishment, to a certain extent, of new criteria by which the qualities and value of leather for practical purposes are henceforth to be estimated. A large factory in Lant Street, Southwark, has been fitted up by Mr. PRELLER, and he is there carrying on his manufacture to a very considerable extent, and with a degree of success which could hardly have been supposed would attend his efforts in the comparatively short time which has elapsed since he began. His leathers have already acquired a high reputation in the market, and are rapidly getting into favor for a variety of manufacturing purposes, especially for driving-bands, for which their superior strength, flexibility, uniformity of texture, and durability, render them eminently serviceable."

The difference in quality of the skins thus treated, and such as have been tanned with Oak bark, Cat-chu, or similar substances, is represented to be strikingly in favor of the patent process.

The peculiar merits of PRELLER's method are said to be these. It reduces the weight of leather, and at the same time increases its strength; and this takes place to such a degree that "it has been found that

Oak-tanned leather of 3-8ths of an inch in thickness is incapable of resisting a strain which PAELLER's leather 1-4th of an inch in thickness will resist in constant working. A strip of it a yard long, about half an inch in width, and 1-8th thick, gave way with a breaking weight of 6 cwt. 20 lbs.; while ox-hide, well tanned on the Oak-bark system, and of the same dimensions, could only resist a strain of 5 cwt. As another illustration of the superior strength of Mr. PRELLER's leather for driving-bands, we may mention a circumstance which was told us at the factory, that on one occasion, to lengthen a driving-band made of his own leather, he added to it a piece of Oak-tanned, and that the latter gave way in the performance of its work. Sheep-skins, kid-skins, and some other species of leather, which in general may be torn asunder in the hands with the exercise of only a small degree of force, acquire in this process a strength which is quite surprising, of which we had experience ourselves when a piece of split sheep-skin, of large size, was put into our hands, and we were requested to try to break it."

Another great advantage in PRELLER's process, is represented by the same authority to consist in saving time in the process of preparing. "The thickest ox-hide requires only two days and a half to be fully converted by the application of this process, of which Mr. PRELLER showed us an example in the hide of a large prize ox exhibited at the late cattle show. Under the most favorable circumstances, it now requires four or five weeks' subjection to the tanning liquor. Under the old process of tanning, in which the hides were placed in the pit, with layers of tan to separate them, and afterwards filled with water, a very considerable period has been known to elapse during the process; sometimes amounting to four years. This old fashioned method has not been yet completely abandoned for more scientific ones, and contrasted with it the great change which this invention has effected is the more remarkable. The walrus skin exhibited in the Great Exhibition took no less than four years to tan; but Mr. PRELLER estimated that by his mode of treatment, the conversion would be perfect in 60 hours, allowing six periods of agitation in the drum, each of 10 hours' duration. The economy of time in the conversion of hide is a circumstance strongly favorable to the practical working of the system, and is calculated to give to this branch of industry a degree of activity not hitherto experienced."

It is further stated that leather prepared thus, without tan, possesses greatly increased capacity for resisting the passage of water, combined with remarkable suppleness; so that for boots and shoes it is far preferable to tanned leather. "When ordinary leather," says our well informed contemporary, from whom we borrow these particulars, "is boiled in water, it gradually hardens and becomes rigid; and if the operation be continued for half an hour, it will be found to have assumed a kind of woody texture, and to have become brittle. Some descriptions of leather, on the other hand, become converted into a mass somewhat resembling glue. When PRELLER's leather is tried in the same way, it gradually approaches to the condition of horn, but it requires several hours before that state is attained. In its ordinary condition, as before observed, it is remarkably supple, and that quality admirably fits it for being used in the soles of shoes; for the West and East Indies, in particular, this quality is highly advantageous, and for the supply of troops would probably be found to be attended with economy, and productive of comfort."

We can hardly over-estimate the importance of these facts to country gentlemen; for, if further experience shows them to be fairly stated, of which we have no reason to doubt, then it is clear that the timber on an estate will become seriously depreciated, and all valuations have to be made upon an entirely new basis.

Guano.

There have been wide and loud complaints, made to us by farmers in various directions within 30 miles of Philadelphia, of the management of the Guano trade, and the difficulty of getting a supply the present fall. So long as there was none in the market there was no disposition to find fault. but many persons on the faith of the advertisements of the agent, went with their teams often a great distance to purchase for themselves and neighbors, found Guano on the wharf, but were obliged to come home empty after waiting several days in the city at great expense and loss of time. They were told it was *engaged*, and yet engagements with them were refused. What is said to be the object of the Peruvian Government, to accommodate the farmers and keep the price down, by refusing to let it go into the hands of *dealers*, is a praiseworthy motive; but it don't *work* right as now managed. To say nothing of the rough language and reception many have been treated to, and which would prevent any farmer of sensibility from undergoing, more than once, even if he had to sacrifice his crop, the expense of going several times to the city, and remaining some days, brings the price up several dollars per ton. We have heard farmers say they would rather pay \$50 per ton, than be subjected to the loss and vexation they are at present. Then agents and dealers in some way or other *have obtained* Guano to our own knowledge at the regular price \$44 and have resold it to farmers at \$55. We know of one person, who obtained 30 tons, and disposed of it at that price. The present system is evidently wrong, and should be changed. The laws of trade, supply and demand if let alone will regulate themselves better, and be more satisfactory than any attempt to create a monopoly. We quote the following from the Southern Planter, as containing some valuable suggestions. The subject should receive attention at Washington, as Guano has become one of the indispensables, and recent news indicates that the *supply* is almost inexhaustible.

The Executive Committee of the Virginia State Agricultural Society at its late meeting, I think, appointed a sub-committee to wait upon the President of the United States for the purpose of bringing about negotiations with the Peruvian government, to the end, that guano might be introduced into this country on more favorable terms to the farmer than at present. The movement is a laudable one, but from my recollection of the terms of the resolution, if the committee feel itself confined within the strict letter of its instructions, its labors will prove of no avail. It is well known that the Peruvian government is un-

der obligations (of the precise nature of which I am not informed) to the British Government, by which the revenue derived from the exportation of guano is pledged for the protection of British subjects who are creditors of Peru; and if this debt has not been discharged it will prove an obstacle in the way of successful negotiation. This if the Peruvian government were sincere, when recently approached upon the subject, appears to be the *root* of the evil. Should the debt not be a much larger one than I have any idea it is, I propose to get rid of this evil by letting the United States apply the surplus revenue which is so rapidly accumulating in the treasury, and will be for years lying idle there, to the extinguishment of these debts, by lending the amount of the debt to the Peruvian government and assuming the attitude of the principal creditor. I am of that school which has endeavored to confine the General Government within the limits of its delegated powers, and can see no constitutional objection to such a measure, but if others more far-seeing, view the subject differently, there are enough enterprising citizens in the country who would willingly advance the money and relieve Peru from the thralldom of British cupidity. If this, or something like it, cannot be accomplished by negotiation, or if it could, I would farther propose that efforts be made to allow free competition in bringing guano to the United States. It is due to our commercial marine that this should be done. I understand that no vessel is allowed to purchase guano or to load at the island, unless chartered by the Peruvian government. It would not be unreasonable to ask of that government to fix upon a uniform rate of charges at the islands and permit vessels from all parts of the world to load and sell the guano in what market, and at what price they thought proper. The price would then, like the price of every other article of commerce, be regulated by its value, and by the supply and demand. Now it is a complete monopoly; and it appears to me we are allowing the Peruvian government exclusive privileges inconsistent with the spirit of our institutions, and at war with the rights and interests of our own citizens: for if Peru has the power to establish an agency in the United States which has alone the privilege of selling guano, England has the same right to establish an agency with the sole power to sell her cloths, and France the right to establish one exclusively for the sale of her silks, &c. There is this difference, it is true, in the one case the government exercises exclusive ownership while in the other the subjects of government are the owners. But I do not think the merits of the proposition are materially altered by the changed relation, for governments might assume the proprietorship of every article of commerce and produce monopolies of every known commodity throughout the world. The mines of California belong to the United States, but it is not pretended that this government would have the right to establish an assay office in London under the control of an agent who should alone vend the article of gold. If the right exists it would be impolitic to exercise it; and I am utterly amazed, that in the case of Peru it has been so long tolerated by the government of the United States. The only explanation which can be given to it is, that the rights of that portion of the community have been chiefly invaded who submit to every burden and every imposition without murmur, and who are so wrapped up in their high and noble calling that they would rather suffer wrongs, enjoying the peace of their own firesides, than gain their rights by agitation. No other class of men would

submit to such impositions, and I trust that our agricultural societies, which are multiplying in all parts of the country will bring about such combinations of interests as to make the sting of the crushed worm felt in more ways than one.

I have been led to these remarks by the evils which the agricultural community have suffered, and the wrongs they have borne under the agency of the Peruvian government in disposing of the single article of guano. That government, it is understood, has given its agent orders to sell this article to none but farmers. The agent *professes* to obey the instructions of its master, but it is notorious that farmers cannot get it while merchants can; and things have been so managed that speculators have got the entire control of the market, and carried the price up to the enormous and unreasonable sum of \$60 per ton of 2000 lbs. when the government price to the farmer is only \$46 per ton of 2240 lbs.—a difference of nearly fifty per cent., or \$20 in the short ton. How is this, if the agent has acted in good faith? The inference may be naturally drawn that either the principal agent is grossly ignorant of his duties, or that he and his *subs* have been false to their trust, or, lastly, but not probably, that these tricks are done under the connivance of the Peruvian government. Whether this inference be just or not, I will not pretend to say, but I speak what I know when I assert that farmers have been rudely turned away without guano by the principal agent in Baltimore, who have since employed and paid merchants a commission to buy it for them. I, moreover, know the fact that at least three cargoes of guano have been ordered to the sub-agents in Alexandria and Washington, and yet the farmers on the Potomac and Rappahannock rivers have been unable to obtain a supply. Messrs. Fowle, of Alexandria, received a very large cargo, all of which was *engaged before its arrival*, and were subsequently to have another smaller one of eight hundred or a thousand tons, which was also *engaged*. Mr. Fitzhugh Coyle, of Washington, certainly received one and, perhaps, two large cargoes, which were also *engaged before their arrival*. Now I do not charge either of these gentlemen with disobeying the *published* orders of the Peruvian agent to sell to none but farmers, and at fixed rates; but yet appearances are against some one; for out of this large quantity which has arrived at a single port I cannot count up fifty tons in the hands of farmers on the rivers mentioned. (It is true that some was distributed among a favored few.) Whereas, it is a notorious fact that speculators in Alexandria have it in abundance at sixty dollars per ton of 2,000 pounds. If necessary, I will mention the name of one—a Mr. Masters. Now, how did Mr. Masters get this guano, in the face of the declaration by the Peruvian agent, that none but farmers were to have it, and that at forty-six dollars per ton of 2240 pounds? Will Messrs. Barrada & Brother be good enough to inform us? Speculators in other parts of the country have it also in any quantities at these enormous rates. It is for sale by them in Richmond and Fredericksburg, as well as Alexandria, I know, and no doubt in all the principal towns in the United States, where it is used. This state of things has been accounted for by suspecting a collusion between the agents and speculators, supposing that the excess over the government price is divided between them. I have heard of such things; but I do not vouch for their truth, because I know nothing about it. Yet there is something mysterious in the attitude of the question; all *seems* well arranged to fleece the farmer; and the public will indulge in its

own conclusions until the matter is cleared up. If the Peruvian agent has not connived with these parties, he can easily bring them to a correct account of their respective agencies, by requiring that the names of parties to whom guano has been sold and the quantity to each shall be furnished him, and then for him to have them published in the agricultural papers of Virginia and Maryland, with a request that they will respond to their names; and in this way, it will be found whether they are "men in buckram."

Plum Tree Warts.

MESSRS. EDITORS:—

A fitting time has now come for me to redeem the promise made to you on the third of last December. You are fully aware of the circumstances that have prevented my doing this sooner. I am now prepared not only to give some account of the insects, supposed by many persons to be the cause of the black knots or warts on plum trees, in reply to your enquiries, together with my views concerning the nature of these tumors on the trees, but to add thereto the result of apparently successful experiments for their cure and for their prevention. My communication will necessarily be too long to be inserted entire in one number of your paper, and it will hardly admit of being abridged. It may, therefore, if you think proper to print it, be divided into several parts, each of which may form an article by itself. Under the first head, some remarks will be made upon

INSECTS THAT PUNCTURE PLUM TREES.

I have carefully read and reflected upon the interesting letter, addressed to you, on the 17th of November, by Rev. Samuel L. Rockwood, of Hanson, and have examined the punctured twig which he then sent to you. This little twig contained a row, three quarters of an inch long, of little punctures, extending obliquely to the pith, in each of which had been inserted a minute egg. Several of these eggs were exposed when the part was cut open. They were oblong oval, of a whitish color, and about one-twentieth of an inch long. At first sight, they might be mistaken for tiny maggots, on account of their form and their softness. As, in all respects, except their minuteness, they resembled the eggs of the *Cicada septendecim*, or seventeen-year locust, and were deposited much in the same way as those of the latter insect, I had no hesitation in referring them to some insect of the same order. It is to be hoped that Mr. Rockwood, agreeably to his intimation, has already traced the progress of the insect from the egg to the winged form, or at least has detected the parent insect while making her deposit. This, he observes, was usually made in twigs of the preceding year's growth, in which, moreover, the black knots are oftenest found to occur. It is not only possible, but even highly probable, that the black warts or knots would be developed in the punctured parts, should the tree be in the condition, or exhibit any tendency, to produce them at all. Whatever views may be entertained on the subject, it must be admitted that this concurring condition or tendency is required in order to be followed by the result above named. Let me illustrate my meaning by a familiar example. The bites of mosquitos are followed, in most persons, by inflammation and swellings. Some persons, however, are not in the physical condition, or have no tendency, to be thus affected; and hence with them the bites of mosquitos are not followed by irritation and tumors. Mr. Rockwood is probably right in

supposing that he detected, in the punctured parts, the signs of incipient warts, whose growth he arrested very judiciously and promptly by cutting out the part and applying soap to the wound. It would give me pleasure, if space permitted, to embody the whole of his letter to you in this communication; but I must pass to another of the same tenor.

On the 19th of March, the Hon. B. P. Johnson, of Albany, Corresponding Secretary of the New York State Agricultural Society, sent to me some twigs of plum and cherry trees, which had been punctured by insects, and also the insects by which these punctures had been made. They were taken from the trees of George Clark, Esq., of Springfield, Otsego county, New York, who gave to Mr. Johnson the following account of them. The insects were found to deposit their eggs about the last of August. From observations, made during three successive years, he is satisfied that the black knots originate from the punctures of this insect. His gardener has adopted the plan of examining carefully the branches of the plum and cherry trees, and cutting out the wounded parts, and has thus succeeded in preventing the formation of the knots; but, when the limb has been left with the incisions upon it, the knots appeared during the second season. My answer in full to Mr. Johnson's letter will be found in "the Horticulturist" for June, pages 283 and 284. The appearance of the wounds and of the eggs contained therein was precisely similar to that of the specimens furnished by Mr. Rockwood. The insect, that accompanied these punctured twigs, was a small tree-hopper, described by Fabricius under the name of *Membracis bubalus*, and alluded to in the second edition of my Treatise on Insects injurious to Vegetation, page 192. It is one of the kinds whose history before has not been particularly investigated, and of which it is stated, in my work, that "the habits of some of the tree-hoppers are presumed to be much the same as those of the musical harvest-flies (or cicadas); for they are found on the limbs of trees, where they deposit their eggs, only during the adult state, and probably pass the early period of their existence under ground.

The above-named tree hopper is a greenish insect, about four-tenths of an inch long, and one-fifth of an inch wide across the broadest part, or from tip to tip of the lateral horns of the thorax. It is somewhat wedge-shaped in form, being narrow and latterly compressed behind, and widest before, where, on each side, there is a short horn; on which account it obtained the name of *bubalus*, or the "Buffalo." The thorax, to which the horns pertain, is triangular before, and covers nearly the whole of the back with a sharp ridge. The face is vertical, and is not seen from above. It has the power of leaping, in which it is usually aided by its wings. Like other tree-hoppers, it sits upon a plant or tree in the longitudinal direction of the twig on which it rests, with its head towards the extremity of the twig; and it never perches across a branch like a bird. While resting as above described, its eggs are deposited; for which purpose it is provided with a piercer, lodged in a groove beneath the hinder part of the body. With this piercer, when withdrawn from its groove, it punctures the twig, and deposits in each puncture a single egg. The eggs appear to remain unhatched through the winter. On being hatched in the spring, or in the early part of summer, the young probably, like the young of the *cicada*, drop or descend to the ground, burrow beneath the surface, and live there upon the sap of the roots of plants, which they im-

bibe by suction through their sucking tubes or bills. Like the *cicada*, too, when they have come to their growth and are ready to take the winged form, they probably come forth from the ground, ascend the stem of some plant, cast off their skins, and then appear in the adult or perfect condition, in which they are prepared to continue their kind. I have frequently seen the empty skins of this or of a similar species, after the final transformation, remaining upon the stems of plants or the trunks of trees.

The punctures made by this tree-hopper are so large that there cannot be any difficulty in finding them, when carefully looked for. In the latter part of March I examined repeatedly some of my plum trees, which have heretofore been subject to warts, without discovering any punctures upon them. Nevertheless warts have appeared on some of the twigs, that were previously noted as being free from punctures or incisions of this insect. Readers can draw their own conclusions from this fact.

THADDEUS WILLIAM HARRIS,

Cambridge, Mass., July 28, 1853.

[*Boston Cultivator.*]

Dissemination of Agricultural Information and Farmers' Clubs.

The first great desideratum necessary to the furtherance of this object is, that public institutions should continue their aid by fairs, premiums for superior products, the organization of Conversational Meetings, and above all, that those institutions should have no jealous feelings towards each other. In our own State we have a State Agricultural Society, the American Institute, and numerous county Societies, each of which in its way can be materially useful to the agricultural community, and either of which may destroy its usefulness, and in part that of other institutions, by the slightest exercise of jealous feelings. Let the county Societies organize Farmers' Clubs. In every township where church or school house exists, there are certainly farmers enough in the immediate neighborhood to organize a Farmers' Club, which may meet one evening in the week throughout the year, and discuss the methods of working, style of crops, &c., belonging to the season.

The trustees of every church and schoolhouse will doubtless be willing to give the use of their buildings for evenings, when they are not required for other purposes, or the use of such clubs. The Conversational Meetings should be held, and farmers sons and apprentices should be encouraged to attend these meetings.

In our large mercantile cities, we find splendid institutions appropriated to the use of merchants' clerks. The Mercantile Library Association of New York, entirely composed of young men who are apprenticed to mercantile pursuits, own one of the largest libraries in the country. Here these apprentices may spend their evenings, or be supplied with books to read at home. One or more public lectures are delivered per week before the members of this institution.

The mechanics' apprentices of New York have an Apprentices' Library of 30,000 volumes. Lectures are delivered before them almost every night in the week, spacious reading rooms provided for their accommodation, and classes in almost every branch of knowledge connected with the mechanic arts, are organized for their use. Why then should farmers through out the country longer withhold their aid in the education of their sons and apprentices in such matters as

are connected with their art? Let agricultural books be given as premiums at country schools, establish Conversational Meetings, where farmers' apprentices may attend one or more evenings in the week, so that they may take advantage of the observations of older practitioners. With such a system generally adopted, the next generation of farmers would render the acquisition of a new Eldorado of no importance.—These Conversational Meetings are the best known vehicles for the dissemination of useful information. Here a hundred farmers may meet and choose a subject each evening for conversation. Each may make known any facts that have come within his knowledge, for the benefit of the whole, and thus in one hour the experience and reading of one hundred men for twenty years, may be made known to each other—and every person present at the end of this hour, will know more of the subject conversed upon, than any person present at the time of the commencement of the meeting.

The secretaries of these clubs could put them elves in correspondence with distant Societies, and thus secure an exchange of seeds, grafts, &c. No such application ever made to the American Institute has been passed by unheeded, and we presume every institution in the country would willingly pursue a similar course. Any of the State Societies, on application, would furnish a copy of their transactions to such a club, and thus the nucleus of a library would be formed. On town meeting and election days throughout the country, there should be organized a Conversational Meeting, to be in session during the leisure part of such days, and the public generally could be invited to attend, and discussions held as to the improved methods of road-making, and any other subject of interest to the district.—[*Working Farmer.*]

The Arab Horse.

Layard, the explorer of Ninevah, who is as familiar with Arabs as he is with antiquities, gives in his late work, *Assyria*, some curious details respecting the true horse of the desert. Contrary to the popular notion, the real Arabian is celebrated less for unrivalled swiftness than for extraordinary powers of endurance. Its usual pace are but two—a quick walk, often averaging four or five miles an hour, and a half running canter; for only when pursued does a Bedouin put in his mare to full speed. It is the distance they will travel in emergency, the weight they will carry, and the comparative trifle of food they require, which render the Arabian horse so valuable.

Layard says that he knew of a celebrated mare which had carried two men in chain armor beyond the reach of some Aneyza pursuers. This mare had rarely had more than twelve handfuls of barley in twenty-four hours, excepting during the spring when the pastures were green; and it is only the mares of the wealthy Bedouins that get even this allowance. The consequence is that, except in the spring, the Arab horse is lean and unsightly. They are never placed under cover during summer, nor protected from the bitter winds of the desert in winter. The saddle is rarely taken from their backs. Cleaning and grooming are strangers to them. They sometimes reach fifteen hands in height, and never fall below fourteen. In disposition they are docile as lambs, requiring no guide but a halter; yet in the fright or pursuit their nostrils become blood-red, their eyes glitter with fire, the neck is arched, and the mane and tail are raised and spread out to the wind; the

whole animal becomes transformed. The vast plains of Mesopotamia furnish the best breeds, and these breeds are divided into five races, of which the original stock was the Koyheleh. The most famous belonging either to the Shammer or to the Aneyza tribes. Their pedigrees are kept scrupulously, and their value is so great that a thorough-bred mare is generally owned by ten or even more persons. It is not often that a real Arabian can be purchased. The reason is that on account of its fleetness and power of endurance it is invaluable to the Bedouin, who, once on its back, can defy any pursuer except a Shammer or Aneyza with a swifter mare than his own. An American racer, or even an English hunter, would break down in those pathless deserts almost before an Arabian became warmed up to its work.—Where thorough bred mares have been sold they have brought as high as six thousand dollars; but these, it is understood, are not the best of the race.

The Arab who sells his mare can do nothing with his gold, and cannot even keep it; for the next Bedouin of a hostile tribe who comes across his path, and who has retained his mare, will take it from him and defy pursuit. Layard thinks that no Arabian of the best blood has ever been seen in England. If this is so, we can scarcely suppose that any have come to America, but must believe the so-called Arabians given to our Government at various times, to be of inferior breeds. Rarely, indeed, are the thorough-breeds found beyond the desert. It will be a subject of regret, to those who admire fine horses, to learn that the Arabian is considered to be degenerating, the consequence of the subjugation of Arabia, and the decline of the Bedouin tribe.—*Phila. Bulletin.*

[From Smiths new Landscape Gardening.]

Planting and Transplanting of Evergreens.

The distribution of evergreen trees and shrubs is among the most interesting operations in the formation and improvement of pleasure-grounds; in the first, they give at once a clothed appearance to what was bare ground; and in the second, by their change of position they effect an almost entire alteration in the scenery of the place. Success, however, requires not only careful execution, but also due attention to the proper seasons for the performance of the work.

In all cases, it is advisable that the ground should be well drained and trenched; and where poor, it should be enriched with fresh soil or manure, or both, especially when the shrubs are young and small.—Light sandy soils are greatly improved by moderate additions of clayey loam or peat earth. In transplanting shrubs of considerable size, we prefer putting the enriched soil or manure close round the ball, and in contact with the young fibres. In such cases, too, it is useful to prepare the plants, by cutting a trench round them; a year or two previously, as recommended in relation to forest trees.

All shrubs, and especially large ones, should have an ample supply of water when they are transplanted, and this is most effectively given when the water is run into the new pit in which the plant is placed along with the filling-in of the earth, beginning when the pit is about one-fourth filled, and continuing till it is nearly quite full.—The quantity of the water should be such as to form a strong puddle round the ball. This mode of watering keeps the roots moist, as well as consolidates the earth about them; and if carefully done at first, will scarcely require any additions. If the water is not administered till after the earth has been fully pressed in round the roots, frequent repetition and larger quantities will be neces-

sary, and the same beneficial results will not be attained.

There has been much difference of opinion, and many discussions, respecting the most suitable season for transplanting evergreen shrubs. Some recommend the autumn months, others the winter and spring.

It is admitted by all, that the transplanting of evergreens should not be attempted when the plants are in full growth; for, though even then they may survive the shock, the chance is that most of them will perish or die down to the ground. It seems also ascertained, that the loss of the evergreens when transplanted is caused by the excess of perspiration from their leaves, compared with the quantity of sap taken up by their mutilated roots; and that, consequently, dry, parching weather, at whatever season it occurs, is, other things being equal, the most unpropitious for the operations to which we are now adverting.—At first sight, this principle might seem to exclude the end of summer and early autumn from the seasons available for planting; and yet it does not, and that for various reasons. At the period to which we have referred, there is much warmth in the soil, and as the perfected sap is then descending from the leaves, the growth of roots commences rapidly and goes on to a considerable extent, in which case the plant is soon out of danger. Then there is often cloudy and dripping weather, after the turn of the day, as it is called, and every one must have remarked the greater geniality of that season in regard to growth, as compared with spring. Besides, in the spring months, the soil is colder and the atmosphere is drier than in autumn; as may be seen from the table on the opposite page.

The conclusions to be derived from those tables plainly point out autumn as the best period for the transplanting of evergreens; and yet, when rightly considered, they admit of that wide range of time which actual experience authenticates. We believe that evergreens, in small quantities, have been safely transplanted from midsummer to the end of April perhaps we might say the whole year round. This has occurred from a compensation of advantages and disadvantages. Take August, for example: the air is then drier than it is two months later, but the soil is warmer; and if the plants escape a blazing sun for a few days, the growth of roots will commence, and will very speedily supply to the leaves all the perspirable matter that is needed. Thus, an equilibrium of action is rapidly established.

DEPTH OF THE ROOTS OF TREES.—In the spring of 1850, I removed an apple tree which was growing on a gravelly ridge, to a place prepared for it a short distance from whence it was taken. The tree was six inches in diameter, had been planted, I should judge, about twenty years, and had been top-grafted a few days previous to its removal. The tree and most of the grafts set in it are growing thriftily.

In the place where the tree stood, I sunk a well, and in the digging traced the roots of the apple tree downwards to a depth of over twelve feet below the surface of the ground. My attention was called by the appearance of the roots, as the workmen were going on with their work, and a measurement was made. How much deeper the roots could have been traced, I cannot tell, but I was well satisfied that they did extend some little below the measurement. From the great loss of roots, by their spreading so deep and wide, I had little expectation of saving my tree, and still less the grafts so recently set, but was most agreeably disappointed in both.—*R. N. Yorker.*

PENNSYLVANIA FARM JOURNAL

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High Prices of Improved Stock.

The unprecedented prices, both in England and the United States, obtained the present season at the public sales of cattle and sheep, are well calculated to startle a plain, matter of fact farmer, who is apt to value an animal according to his worth for the butcher, and to induce the inquiry, is not this all mere speculation? Is a Bull ever really worth \$3 or \$4000, and will he at this figure ever pay, taking into consideration ordinary risks and accidents.

It must be considered that, in the present extraordinary state of prosperity in the country, there are many things going off at speculative or fancy prices besides Durhams. Any expansion of the medium of exchanges, whether of the precious metals or bank paper, has a tendency to induce speculation and raise the price, not only of Durham stock, but Railroad and Bank stocks, real estate and every thing else, having either real or *fancied* value. This does not by any means depend on the fact of the valuation being either real or fictitious, as we see daily fluctuations in our large cities in investments, where *every thing is assumed*, the market price depending on the relative daily or hourly scarcity of money, and the business condition of large commercial centres. A common brick may be taken up and used as well as any thing else for a kind of medium of speculation, an assumed value of a few thousands put upon it, and passed from hand to hand, raising or lowering in price by operation of extrinsic causes, knocked about like a shuttle, till suddenly the bubble bursts, and the brick comes back a mere brick, to its starting point. The tulip mania in Holland and the multicaulis humbug here were cases of this kind, neither of them having any real value comparatively. The tulip bulb was worth a few cents, and the multicaulis also, as a shade tree, but the high prices, at which they were sold, were founded on a false basis, and the latter particularly on wrong deductions as to the capacity of the United States to be a silk growing country. Now are the present high prices of blooded stock to be viewed in

the same light? Is there no real, intrinsic value in Durhams and Southdowns on which to predicate the enormous rates they have been selling at, and to some extent justify them? Admit these are to some extent speculative, just as other articles of purchase and sale at the present time, still when business, now inflated, shall revert to its ordinary level, will there not then be found to be a substantial value remaining? This, we think, is the true view to be considered, and in doing so it is not necessary to agitate the question as to the merits of the Durham breed; that has long been before the farming public, and it may be considered a *settled* point, that in certain particulars, *as a breed*, they are unrivalled, and their superiority to any other known is a generally admitted fact.

The expediency and profitableness of any one buying a bull for \$3 or \$4000 is a matter for his personal consideration only. In a district of country where raising of stock is extensively followed, and in the present high times, a superior bull, where his strain of blood was particularly valued or very scarce, serving 30 or 40 cows, annually, at \$25, \$50 or \$100 each, would soon remunerate his purchaser, and in Kentucky, Ohio and New York, these prices would be cheerfully paid for the opportunity of obtaining a desirable cross. Indeed, the benefit to a whole neighborhood or district from the introduction of a superior animal may, in this way, be almost incalculable; neither would his purchase be any more purely speculative than an operation in real estate, in any of our large cities, during a rising market, where, \$20, \$30 and \$40,000 are given for a few square feet of ground, not worth under ordinary circumstances more than half the money. The market value of any thing is very much regulated by the extent of supply. At the recent sales, where such enormous prices have been paid for first choice animals, it will be observed to have been on account of some particular strain of blood or pedigree. Some rare points of form or character which the experi-

ence of eminent breeders, have proved to be a great desideratum. These did not come by chance, but were the scientific results of the long continued care and skill of such men as Thomas Bates, Earl Ducie, Lord Spencer and many others. The Duchess and Princess family of short horns have long commanded in England the highest prices, for the reason that they are identified with certain valuable characteristics not found elsewhere in the same perfection. The late Earl of Ducie was, said never to stop at price when he found such an animal as he thought the breeding of his herd required. To have a very small amount of offal, to possess early maturity, to be heavy in the most valuable parts of the beef, a kindly disposition, rapidity of fattening, and in a cow the property of deep milking; these are points, not of mere fancy, but real value, and where they are derived from a good ancestry, may be continued and carried down in the offspring.

A Durham cow of our own importation, some years ago, made over 15 lbs. of butter per week. Supposing a common cow, making 7 lbs., to be worth \$30, was she only worth \$60? Certainly not. On the principle that like produces like, and that this deep milking would be retained in her descendants as it has been in several instances, where the admixture on the other side was judicious, the real value of such a cow could hardly be estimated.

At one of the recent ram lettings in England, the services of seventy-one rams were let for one year, at an average of \$111 each, and one for \$650. This latter (one of Webb's Southdowns) was subsequently purchased by F. Rotch, and is coming to New York. We can easily imagine a cross with such a buck, under certain circumstances, to be worth \$1,000 or \$2,000, provided he excelled in certain points a flock was before deficient in.

We have known of a flock of pure Downs to be so reduced in size and character by breeding in and in, as to be almost valueless except for the butcher. A strong cross with a good buck would have had the effect of increasing their value fifty fold.

While the high prices we have adverted to are to a certain extent speculative, and indeed like other things induced by the present condition of the country and abundance of money, still we do not consider them entirely so, and have entire confidence that the whole country will be benefitted by the enterprise and public spirit of those who have made such large investments.

Agricultural Exhibitions.

This season has been remarkable so far for the number and success of these, not only in our own State and county, but in others around us. In many parts of Pennsylvania, they have been held for the first time, and have awakened the dormant energies of the farmers; who have been surprised themselves in see-

ing collected such numbers of improved implements, stock, seeds, vegetables, &c. At our own State Fair, \$16,000 were received from members and admission fees, which, we understand, exceeds any State Exhibition hitherto held.

In York county, over nine acres were enclosed, which was crowded with visitors and contestants for premiums, many of the latter being from Baltimore.

In Bucks county, the exhibition was held on the 29th of September, at Newtown, and appears to have been very spirited in every department of farm industry. The premium list took a wide range, including a ladies' and home department, in which the competition and display was quite extensive, embracing home made bread, preserves, also needle and crocheted work, netting and knitting, straw hats, coverlets, counterpanes, &c. An excellent address was delivered by Judge Smyser, exhibiting much research and good practical suggestions.

The Berks County Exhibition, held at Reading, "is said to be superior to that of last year, the contributions larger and more varied, accommodations better, and the attendance beyond all precedent,—not less than 10,000." A ploughing match was also held at the close, and several premiums awarded for skillful ploughing. The receipts were over \$1,500. An address on the occasion, by the Hon. J. Glancy-Jones, was listened to much interest and is spoken of as a most able production. One in German was also delivered by Rev. J. W. Richards, D. D.

Our friends over the river, of the Camden and Gloucester Agricultural Society, are also keeping up with the times, and had a large and very spirited exhibition at Haddonfield, which was good in every department, but particularly excelled in the display of fine horses, both for road and draught. The latter being mostly crossed with the Norman stock, which is much esteemed in New Jersey. As this part of the State is much devoted to truck gardening, the display in this department was well worth seeing. A ploughing match was also held, and the whole was concluded by an address from Morton McMichael, of Philadelphia, in his usual good style.

We observe at this society, agricultural, horticultural and other books are distributed, instead of premiums in money, which seems more rational, and are more permanent evidences of skill and success.

APPLES FOR MILCH COWS.—Five minutes ago a gentleman, who deals in facts and figures, as well as fine cattle, informed us that he had fed out last winter more than two hundred barrels of sweet apples to his milch cows, and that the increased quantity and richness in quality of the milk paid him better than any other use which he could have applied them. He says that he is raising trees annually, for the purpose of raising apples for stock. Another important statement of his, is, that since he has fed apples to his cows, there has not been a case of milk fever among them.—[N. E. Farmer.]

Harvest Hymn.

Ged of the rolling year! to Thee
 Our song shall rise—whose bounty pours
 In many a goodly gift, with free
 And liberal hand our Autumn stores;
 No firstlings of our flocks we slay,
 No soaring clouds of incense rise—
 But on thy hallowed shrive we lay,
 Our grateful hearts in sacrifice.

Borne on thy breath, the lap of Spring
 Was heaped with many a blooming flower;
 And smiling Summer joyed to bring
 The sunshine and the gentle shower;
 And Autumn's rich luxuriance now,
 The ripening seed—the bursting shell,
 The golden sheaf, and laden bough,
 The fullness of thy bounty tell.

No menial throng, in princely dome,
 Here wait a titled lord's behest;
 But many a fair and peaceful home
 Hath won thy peaceful dove a guest;
 No groves of palm or fields adorn—
 No myrtle shades or orange bowers—
 But rustling meads of golden corn,
 And fields of waving grain are ours.

Safe in thy care, the landscape o'er
 Our flocks and herds securely stray;
 No tyrant master claims our store—
 No ruthless robber rends away—
 No fierce volcano's withering shower—
 No fell simoon with poisonous breath—
 Nor burning sun, with baleful power,
 Awake the fiery plagues of death.

And here shall rise our song to Thee,
 Where lengthened vales and pastures lie,
 And streams go singing wild and free,
 Beneath a blue and smiling sky;
 Where ne'er was reared a mortal throne,
 Where crowned oppressors never trod,
 Here—at the Throne of Heaven alone,
 Shall man in reverence bow to God.

Cultivation of the Blackberry.

In answer to inquiries about the method of cultivating Blackberries, time of transplanting, &c., we reply nothing is more simple. They may be set out either fall or spring, as is most convenient, and placed in rows four feet apart and two feet in the rows, or if land is plenty four feet each way, to admit of passage of cultivator. The ground should previously be deeply ploughed and subsoiled. Shorten the growth each spring, same as with raspberries. It is surprising the cultivation of this delicious fruit near our large cities is not more common. The productiveness of the plants, no less than the size and flavor of the berries is very much increased by cultivation. It is stated that they have been exhibited in Boston one and a half inches in length. Our last number gives an account of a seedling blackberry, the new Rochelle, which promises to be a valuable acquisition:

S. W. COLE, of Boston, says, "We have seen this fruit sold at \$1 a quart, that was not a whit better (though fine) than we have picked (a quart without moving from our steps) on new lands in Maine.—

We have measured bushes of one year's growth ten feet high. We did not dream, in our boyhood, when tearing our legs among thousands of brambles, of ever seeing this fruit cultivated, and sold at enormous rates.

The blackberry ripens long in succession, coming in immediately after the raspberry. Owing to its great excellence, bees, wasps, flies, &c., claim a large share. Some blackberries are white, but they are as great an anomaly as a white blackbird, or white crows, which is seldom seen.

SOIL, PROPAGATION AND CULTURE.—The blackberry grows freely, in a warm, tolerably dry or rather moist, deep, rich soil. It abounds among stones, old logs, fences, and natural hedges. Keep the land rich and mellow. Besides other manures, use ashes, leaves and vegetable mould. It is propagated by seeds, and by offsets at the roots. Train up new wood, and cut away the old, to keep the bushes vigorous and productive.

HIGH BUSH, (*Rubus villosus*.) Fruit large; long ovate; shining black; very tender, juicy, of a sweet, rich, spirited, aromatic flavor, resembling the orange. Growth straight and upright, then the tops become recumbent. White blossoms. Downing's account of this fruit does not come up to the valuable wild variety sold in Maine.

LOW BUSH, (*Rubus canadensis*.) Small; roundish or irregular; black or reddish black; rather tart, but brisk, pleasant flavor."

Harvesting Potatoes.

The idea generally prevailed that potatoes, especially those grown on low moist lands, are essentially benefitted by exposure to the sun and air before removing them to the bins. This, however, experience has long since demonstrated to be a fallacy. The sooner potatoes are in the cellar, or protected from the sun's rays, after they are removed from the hills, the better, the operation of the solar rays having a powerful tendency not only to deteriorate greatly their eating qualities, but also to render them far less likely to keep well through the subsequent spring.

Another very popular error, and one no less productive of bad consequences, is the supposition that the tuber should be scrupulously and thoroughly cleansed from dirt; the presence of which in ever so small quantity, is considered by many to be the radical cause of their becoming watery and unfit for food. Any one, however, who will take the trouble of experimenting, may easily satisfy himself that such is not the case; and that potatoes which have been thoroughly cleansed by washing or drying, or indeed by any process which effectually rids them of soil, will exhibit symptoms of decay, and become unfit for use, or for culinary purposes, much sooner than those which have not.

In many sections it is a common practice with farmers to select a portion of their best, and most perfectly matured and developed tubers, and pack them carefully and compactly in barrels, filling the spaces between the roots with soil, cool and moist. The barrels thus filled, are placed in some dark cellar, where they remain undisturbed till the contents are demanded for the market, late in the season, for domestic use.

Secured in this manner, and deposited beyond the reach of light and heat, or where they will be as little exposed as possible to these powerful agents, potatoes will keep perfectly sound and retain their eating properties unimpaired till late the following year.

Every observing farmer must have noticed that the potatoes that are "crowded out" from the sides of hills, or which are found so near the surface as to be frequently exposed by heavy rains washing away the soil; always turn green, and when cooked, have a sweet, coppery taste, which is extremely nauseating and unpleasant. This is always a result of exposure to solar action; it concentrates a principle which the potato contains in conjunction with many others of a nutritious nature, into an active poison, and hastens greatly the decay and decomposition of the roots. As soon as they are taken from the soil, they should be placed in the bins.—[*Republican Journal*.]

For the Farm Journal.

Superphosphate of Lime.

In the "GENESEE FARMER" of September last, (page 281) there is an article headed—"MAPES' IMPROVED SUPERPHOSPHATE OF LIME." The writer, after enumerating some crops for which he regards the use of Superphosphate highly advantageous, thus proceeds: "For wheat, barley, oats, potatoes, and, we believe, though we have no experiments of our own to sustain the opinion, that for corn and timothy superphosphate of lime, in ninety-nine cases out of one hundred, will be found of no essential value."

Fearing the above statement, coming from such high authority, might mislead some of our Agriculturalists, in the use of a valuable fertilizer, I beg leave to quote some experiments leading to a different conclusion. Bone dust is known to be a leading principal ingredient in the composition of Superphosphate of Lime. About twenty years ago, I tried my first experiment with bone dust. I had about an acre of ground lying out as "old field" having been cut off by a new road, and not considered worth fencing by the former proprietor. The soil was thin, laying on a clay sub soil. Having fenced it, I farmed it with corn, but the crop scarcely paid the expense of farming. The next summer I farmed it as an open fallow; plowed it three times and in September seeded it down with rye and timothy. I procured from Philadelphia six bushels of bone dust. This I had intended to have harrowed in with the rye, but was disappointed in getting it hauled until about a week after the rye come up. I then sowed it broad cast on top of the ground. I applied no other manure.

Now for the result. The crop of rye was fully equal to my wishes, some of it was lodged. The grain was plump and heavy, and I regret very much that I did not keep an account of the number of bushels. I took five timothy crops off the same ground in five successive years; the first was very heavy; they grew lighter each successive year; but the fifth was worth cutting. The ground received no further dressing, except a light sowing of *Plaster of Paris*, each Spring.

I merely state the above as facts; every farmer can draw his own conclusions.

I beg leave, in addition, to state some experiments

with Mapes' Improved Superphosphate of Lime tried in this vicinity within the present year. Mr. Jesse C. Green, Dentist of this place, bought a piece of grass land of Mr. Enos Smedley last spring. Mr. Green, by my advice, applied to this a top dressing of Mapes' Improved Superphosphate of lime. Mr. Smedley gave his grass land adjoining and of equal quality, no dressing. At harvest, the crop on Mr. Green's land was fully double that on Mr. Smedley's, and at this time the growing grass shows a decided difference in its favor. On the grass land of Mr. Wm. P. Marshall, the same fertilizer produced the same result. Timothy is the leading grass for hay in this vicinity.

I might also mention the good effects resulting from the same fertilizer to a crop of wheat on land of Mr. Abram Bailey, and of wheat and oats on land of Mr. Paschall Morris.

A. MARSHALL.

For the Farm Journal.

McAvoy's Superior Strawberry.

MR. EDITOR:—I am a subscriber to the Horticulturist, and find, in the September number, an engraving of this now somewhat celebrated variety, so unlike the one in the Farm Journal, that I am induced to write and ask you, which of them we may rely upon as being correct. I have raised strawberries for several years, but have not seen the McAvoy Superior. I have never known, however, berries of the same variety to vary so much as those two engravings. Who shall decide where doctors disagree?

Several of us in this neighborhood are much pleased that the "Strawberry Question," is now wound up and set at rest by the voluntary admissions of those who have been fighting the hardest in behalf of the "fixed sexuality." The interesting communication by your excellent fellow citizen and accomplished botanist, W. D., seemed to cover the whole ground, and leave but little to be said farther on either side. It presented the true points at issue in a more forcible and common sense matter of fact style, than any article which has yet appeared on the subject in any of our journals, and ought to have been the means of sparing us the infliction of three mortal pages in your October number. The author of that long winded communication seems to imagine himself the centre of all strawberry knowledge, and, by his own account has been successful, by his own seedlings, in superseding most of the old and highly esteemed kinds. There is one at least of your readers, who prefers holding on to what he has proved and well tested, than to take up with new ones, even at the direction of a "Prince."

C. STEELE,
Philadelphia county.

Not having fruited the McAvoy ourselves, we were

also struck with the disparity above alluded to by our correspondent, and on the appearance of the engraving in the Horticulturist, wrote immediately to our friend, Dr. Brinckle, from whom we received the drawing. In his reply he says:

"The McAvoy's Superior figured by you is genuine, and an exact representation of the specimen which was grown by Mr. Cope. In our ad interim report, we describe the form as being *roundish ovate*; I have never seen the fruit round except in small specimens. Hovey, in the last number of his Magazine, page 401, says: "the description by the Pennsylvania Horticultural Society of the former (McAvoy's Superior) agrees with ours; with one exception it could not be more correctly described; that exception is the color; their report calls it deep, brilliant, crimson, while we call it a dark, dingy red."

I have seen specimens this season grown by Mr. Buist, as well as by Mr. Cope; and I have fruited it myself from a plant sent by mail from Mr. Longworth in 1850."

Shepherd Dogs.

MR. EDITOR:

Can you inform one of your subscribers and constant readers, where he can obtain a good Shepherd Dog, of pure blood, and four to six months old? What is your opinion of their value as a farmers dog.

J. L.

Dauphin county, Pa.

We are well acquainted with the Scotch Colley breed of Shepherd Dogs, and consider them very valuable to a farmer. We have owned several. They make excellent watch dogs, and are trained without much difficulty to bring up the cows, watch or herd the sheep, and save many a trip of a man or boy in this way. We know where an excellent pup of about the age wanted, can be obtained at a reasonable price.—Ed.

Small vs. Large Potatoes.

In the patent office report for 1852 and '53, which has just reached us, there are many very valuable communications, in the agricultural department of great interest to the farmer. In one of the reports from Maine, by William Upton, Jr., we extract the following, which agrees with the experience of many others in respect to the use of large and ripe potatoes for seed. Whatever may be the original cause of the rot, it is reasonable to infer that the immature seed would be more liable to be affected, as was found in this case, although we do not recollect to have heard before of the same experiment. His letter says:

Till the prevalence of the potato rot, this was a very important crop for this State, not only as a feed for cattle and hogs, but as an article of export; and, next to the hay crop its failure may be considered the severest calamity that could befall the farmers of

this State, and its cause and cure have thus far baffled the researches of the scientific and the practical; though I think its ravages may be somewhat abated by the observance of certain rules in planting. Select, if possible, dry land in good heart, turn the grass under the fall before, and plant as early in the spring as the ground can be worked, without manuring; and in the selection of seed, reject all small, affected potatoes, planting none but those of good size, fair, and suitable for the table. It is a prevailing opinion—and one I consider very erroneous—that small potatoes are just as good to plant as large ones, and, if the theory is true, better, for they will go over more ground. On an experiment I tried three or four years ago, it was found that where five or six bushels of good, selected Carter potatoes were planted in the midst of a field of the same variety of potatoes, unselected, but in other respects planted under precisely the same circumstances, scarcely one of the product of the former was found in the least affected with the rot, while of the product of the latter at least one-third was more or less affected. The Carters are generally considered the most palatable—at the same time they are probably the most subject to the rot of any potato of this region. The long red potato is considered the most prolific. Average potato crop, about 200 bushels per acre.

The culture of the carrot, turnip, and beet, has considerably increased since the prevalence of the potato rot, and they are usually considered profitable. Probable average of carrot crop, 600 bushels per acre.

Lime v. Potato Disease.

At the beginning of August last, I had a bed of ripe walnut-leaved Potatoes dug, the produce of which amounted to three bushels. Conceiving the disinfecting properties of lime might be advantageously employed in checking the progress of the disease, then slightly manifesting itself, I resolved on sprinkling a handful on every alternate layer of Potatoes in the bushel, extending the experiment to 2 bushels only, and storing the remaining one in a dry state without any application. On examining them a week ago, I was gratified at the discovery that five Potatoes only were bad among the 2 bushels to which the lime was applied, while 2 gallons of the other bushel were infected. To prevent the effect being attributed to any other agency than the lime, it may be stated that the whole of the ground was planted with tubers of the same sample, and had previously received similar treatment. I do not find that the lime has, in any degree, affected the quality of the Potato.—W. Sprent, Overton, Sept. 12.

The Richest Mine.

The manure applied to the soil of England amounts to three hundred millions of dollars: being more than the value of its whole foreign commerce, and yet the grateful soil yields back with interest all that is lavished upon it. And so it would be here, if we would only trust the soil with any portion of our capital. But this we rarely do. A farmer who has made any money spends it not in his business, but in some other occupation. He buys more land when he ought to buy more manure, or he puts out his money in some joint-stock company to convert sunshine into moonshine. Rely upon it, our richest mine is the barn yard, and whatever temptation stock or shares may offer, the best investment for a farmer is live stock and plough shares.—Exchange.

John Griggs advice to Young Men.

From "Freedley's practical Treatise on Business."

"1. Be industrious and economical. Waste neither time nor money in *small and useless indulgences*. If the young can be induced to *begin to save*, the moment they enter the paths of life, the way will ever become easier before them, and they will not fail to attain a competency, and that without denying themselves any of the real necessities and comforts of life. Our people are certainly among the most improvident and extravagant on the face of the earth. It is enough to make the merchant of the old school who looks back and thinks what economy, prudence and discretion he had to bring bear on his own business, (and which are in fact the bases of all successful enterprise,) start back in astonishment to look at the ruthless waste and extravagance of the age and people. The highest test of respectability, with me, is honest industry. Well-directed industry makes men happy. The really noble class—the class that was noble when 'Adam delv'd and Eve spun,' and have preserved their patent to this day unimpaired, is the laborious and industrious. Until men have learned industry, economy, and self-control, they cannot be safely entrusted with wealth.

II. To industry and economy, add self-reliance. Do not take *too much advice*. The business man must keep at the helm and steer his own ship. In early life, every one should be taught to think for himself. A man's talents are never brought out until he is thrown to some extent upon his own resources. If in every difficulty he has only to run to his principal, and then implicitly obey the directions he may receive, he will never acquire that aptitude of perception, and that promptness of decision, and that firmness of purpose, which are absolutely necessary to those who hold important stations. A certain degree of independent feeling is essential to the full development of the intellectual character.

III. Remember that punctuality is the mother of confidence. It is not enough that the merchant fulfils his engagement: he must do what he undertakes precisely at the time, as well as in the way he agreed to. The mutual dependence of merchants is so great, that their engagements, like a chain, which, according to the law of physics, is never stronger than its weakest link, are oftener broken through the weakness of others than their own. But a prompt fulfilment of engagements is not only of the utmost importance, because it enables others to meet their own engagements promptly. It is also the best evidence that the merchant has his affairs well ordered—his means at command, his forces marshalled, and 'everything ready for action'—in short, that he knows his own strength. This it is which inspires confidence as much perhaps as the meeting of the engagement.

IV. Attend to the *minutiae* of the business, small as well as great. See that the store is opened early goods brushed up, twine and nails picked up, and all ready for action. A young man should consider capital, if he have it, or as he may acquire it, merely as to be with which he is to work, not as a substitute for the necessity of labor. *It is often the case that diligence in employment of less consequence is the most successful introduction to the great enterprises.* Those make the best officers who have served in the ranks. We may say of labor, as Coleridge said of poetry, it is its own sweetest reward. It is the best of physics.

V. Let the young merchant remember that selfishness is the parent of vices, and it is the parent of a

thousand more. It not only interferes both with the means and with the end of acquisition—not only makes money more difficult to get, and not worth having when it is got but it is narrowing to the mind and to the heart. Selfishness, keeps a shilling 'so close to the eye, that it cannot see a dollar beyond.' Never be narrow and contracted in your views. Life abounds in instances; of the brilliant results of a generous policy.

Be frank. Say what you mean. Do what you say. So shall your friends know and take it for granted that you mean to do what is just and right.

VI. Accustom yourself to think vigorously. Mental capital, like pecuniary to be worth anything must be well invested,—must be rightly adjusted and applied, and to this end, careful, deep and intense thought is necessary if great results are looked for.

VII. Marry early. The man of business should marry as soon as possible, after twenty-two or twenty-three years of age. A woman of mind will conform to the necessities of the day of small beginnings; and, in choosing a wife, a man should look at, 1st. The heart; 2d. The mind; 3d. The person.

VIII. Everything, however remote, that has any bearing upon success, must be taken advantage of. The business man should be continually on the watch for information, and ideas that will throw light on his path, and he should be an attentive reader of all practical books, *especially those relating to business, trade, &c.*, as well as a patron of useful and ennobling literature.

IX. Never forget a favor, for ingratitude is the basest trait of a man's heart. Always honor your country and remember that our country is the very best poor man's country in the world."

How to Kill Slugs.

A correspondent of the Mark Lane Express gives the following method of destroying slugs. It is cheap; and will benefit the soil, though it may not destroy the little pests:

If you suspect slugs working above ground, (I know nothing of their underground work, but I have no doubt they work above ground at night in all cases,) have your land carefully examined by a trustworthy man, with a lantern, about one or two hours after dark, on a moist and as warm a night as you can find at the season of year; then having ascertained that they are there, sow broadcast at night, and the same sort of night, from 6 to 10 bushels of quicklime per acre. Very likely you will have to repeat the dose; and the head-lands should always be done twice, as the hedges and banks harbor them. The expense is but trifling. Two men, the lime having been previously deposited in convenient places, will easily sow 8 acres per night before 12 o'clock. I gave them rather more than I should for the same hours of day work, and about two quarts of ale each night, and they (I always employ the same two) are responsible for looking at the lands I suspect. I once had to sow 8 acres of mangel three times, the head-lands four times, and saved the crop, which turned out remarkably good. This year I sowed 24 acres of wheat twice in the autumn, and 8 acres of it again in the spring.

Another correspondent thus effectually prevents all future depredations, at least from those which he catches:

Strew some fresh cabbage, lettuce, or other succulent leaves, near the scene of action, and visit your leaves every morning, when you will find great num-

bers of them, who have been out on the feed all night, taking temporary shelter under the leaves, when they may easily be caught and dealt with according to discretion. I have caught many bushels of them in this way in my garden, and I now find it pays me well to use the same trap on a large scale on my farm.

The Dogs of St. Bernard.

Most of our readers are aware that the passage of the Alps between Switzerland and Savoy are the most dangerous of the whole range of the natural "cloud cap'd towers;" and that on the slight tableland afforded on the top of the Great St. Bernard an hospice has stood for ages. It is supported by the voluntary contributions of all nations. Catholic and Protestant, Musselman and Hindoo, Christian and Pagan, all find here a neutral ground for the flow of that charity which difference of creed, or race, or clime, can never wholly dry up. And truly it is a noble institution—for the hospitable, monks, though their revenue is scanty, open their doors to every stranger that presents himself. And that is by no means a rare occurrence, for in these lofty regions the traveller is often overtaken by the most severe weather, even after days of cloudless weather, when the glaciers glitter in the sunshine; and the pink rhododendrons appear as if they were never to be sullied by the tempest. On these dreadful occasions, the storm comes on with the swiftness of lightning, drifts of snow choke up the roads, and dreadful avalanches sweep into the valleys, carrying trees and fragments of roofs before them. In these scenes of awful grandeur they mingle, doing their sacred, God like ministry: They devote themselves to the dangerous task of searching for those unhappy persons who may have been overtaken by the sudden storms; and they are assisted in these sacred offices by a breed of dogs peculiar to the establishment, and whose renown is as universal as that of the chivalrous monks. The sagacity of these animals is remarkable. When the traveller, benumbed with cold, and wearied in his search for the lost track, yields to the stupefying influences of frost, and sinks to the ground for the snow drift to cover him—it is then that the exquisite docility and keen scent of these admirable dogs is called into action. They are sent out in pairs, and though the perishing man be twenty feet beneath the snow, the delicacy of smell with which they can trace him, offers a chance of escape. They scratch away the snow with their feet, then set up a hoarse and solemn bark, which brings the monks and laborers of the convent to their assistance. To provide for the chance that the dogs, without human help, may succeed in saving the unfortunate traveller, one of them has a flask of spirits round his neck, to which the fainting man may apply for support, and the other has a cloak to cover him. The dog of the great St. Bernard, a spot 8000 feet above the level of the sea, is, indeed, a beautiful and wonderful animal. He belongs to the spaniel breed, but is peculiarly large and powerful, particularly high upon the legs, and generally of a milky white, or tawny color. The breed having been cultivated with immense care and assiduity for such a number of years, and natural faculties of this fine specimen of the dog having been sharpened by generations of training and experience, it is not surprising that their intelligence should be so highly developed, that actually a kind of language has been established between them and the monks. The instinctive intelligence of these dogs is shown by the curious fact,

that if a whelp be placed upon the snow for the first time, it will begin to scratch, and snuff about as if in search of something. As in the human community, so in the canine, there are degrees of excellence; and among the dogs of the Great St. Bernard this rule is strikingly apparent. The sagacity of some of the dogs is absolutely astonishing.

Ram-Letting.

The practice of letting male animals is very common in England. It has many advantages, and we should be glad to see it adopted in this country. The following from the *Mark-Lane Express*, explains the benefits of the system, so far as relates to sheep:

"It is the peculiar province of ram-breeders to breed stock rams for the use of common flock-breeders; and this mode of breeding has many advantages to both parties. The ram-breeder can afford to procure and put to his flock of ewes better animals, and, of course, more expensive ones than would answer the purpose of an ordinary breeder to use. In this way the ram-breeder is enabled to keep up a more select and valuable flock, from which he can let or sell animals of a truly valuable character to breeders for common use at a low rate of prices; besides, it is also his peculiar province to look out for and introduce every practical improvement into his flock of which it is capable, by judicious selection from the flocks of other approved breeders, and in a great measure regardless of cost; the district depending upon him, expects these things of him; and if he is a man of judgment he will not fail them. He knows, or ought to know, the pedigree of every animal of his flock; and in this way he can and does suit any change of blood or feature to the wants of the flock. In this way he can also suit his friends or customers desiring or finding it requisite to change their blood or intermingle it in their flock; by his peculiar flock-marks he can on application recommend this and the other animal as changes from the usual selection of his friends, thereby rendering it unnecessary for them to resort to other breeders, which is at all times a dubious course to adopt; it is far better to keep to a flock you well know, and to the judgment of a breeder on whom you can depend: the breeding will not be running too close by following this practice."—[*Boston Cultivator*.

Seed Corn.

Now is the time to select ears of corn for seed.—Go into the fields and pluck off the earliest ears and such as are well filled; and you will gain something by selecting from stalks that have two ears on them. It is important that you select in the field and before all the ears are hard, for thus you will gain several days in the ripening next year.

We think it probable that a majority of our farmers neglect to select their seed ears till the time of husking. But then they cannot determine certainly whether they take the earliest ears.

Corn is so important a crop, and so much of it is often lost by early frosts, that it is of much consequence to plant that which will ripen early. We cannot urge the planting of the small Canada corn in our latitude, for it is better to lose occasionally part of a large crop than to be always limited to a small one. We need not go north for seed ears if we will take a little care at the right time and select the ears which first come to maturity. Many farmers know the importance of taking for seed what ripens earliest, but they are apt to forget and neglect.—[*Massachusetts Ploughman*.

Cure for Glanders.

I have lately discovered a remedy to cure the Glanders in a horse; I thought it might be useful to others, and accordingly I send you the information. Some time in May last a man drove up and fastened his horses by mine, and came into the store; afterwards we both went out, and I saw that one of his horses was sick. He said his horse had the glanders, and that he thought it would have died last night it was so sick. I was offended because he had tied his horses so near mine with a contagious disease, and said no more to him. Some days after this the matter being somewhat forgotten, I was passing near my horse; he appeared to be sick; I turned and went up to him, and, sure enough, he was sick! His throat was swollen to a terrible degree, so he could hardly raise or lower his head more than an inch or two. Something must be done, for I could not part with him any way at present. I tried one thing and another, but all to no purpose. Now for a study. What will do the thing? Glanders; what are the glanders? Why, it is diseased glands; the little vessels that bring the saliva to the mouth and throat are diseased—stopped up, and must be opened. What will do it? Tobacco will vomit, and may open them. I took a half a pound of fine cut tobacco, and poured two quarts of warm water on it, and let it soak a few minutes, and washed his throat and so on up to his ears, and down his throat to his legs and between his fore legs. It made him direful sick, and would have vomited him if it had been possible for a horse to vomit. In three hours I bathed him again, and the next morning again. The final effect was, my horse could put his head to the ground after second time bathing, and after the third time he could feed as well as ever, and is well, and has done better ever since. WM. McSHEPARD.

North Sheffield, Ashtabula Co., Ohio.

(Genessee Farmer.)

White Sheep Skins for Door Mats.

Take two long-wooled sheep skins, and make up a strong lather of soap; the signs of proper strength is when the lather feels slippery between the fingers. When the lather is cold, wash the skins carefully in it, squeezing them between the hands so as to take all the dirt out of the wool. When this is accomplished, lift out the skins and wash them in cold water until all the soap is extracted. Have a vessel of clean cold water ready, to which some alum and salt, (about half a pound) which have been dissolved in a small quantity of hot water, are added, and the skins left to steep all night. They are taken out in the morning and hung over a pole to dry. When all the alum water has dripped off they are spread out on a board to dry, and carefully stretched with the hand from time to time. Before they are thoroughly dry, a composition of two table spoonfuls of alum, and the same of saltpetre, are ground to powder, in a mortar or otherwise, and sprinkled carefully on the flesh side of each skin. They are then placed the one on the top of the other, leaving the wool outside, and hung upon a rack of salts, in a barn, shed, or dry airy place, for about three days, or until they are dry—they should be turned every day. After this they are taken down and the flesh side scraped with a blunt knife; and each skin trimmed for a mat. The flesh side may then be rubbed over with pipe clay, beat with a switch, and will then be found supple, of a beautiful white color, and fit for a door mat for a mechanic or prince.—*Scientific American*.

Henery.

The accompanying engraving of a cheap Henery, appeared in the Register & Examiner of this Borough in the early part of last year. It was designed by A. Marshall, Esq., and is well adapted to the object intended.

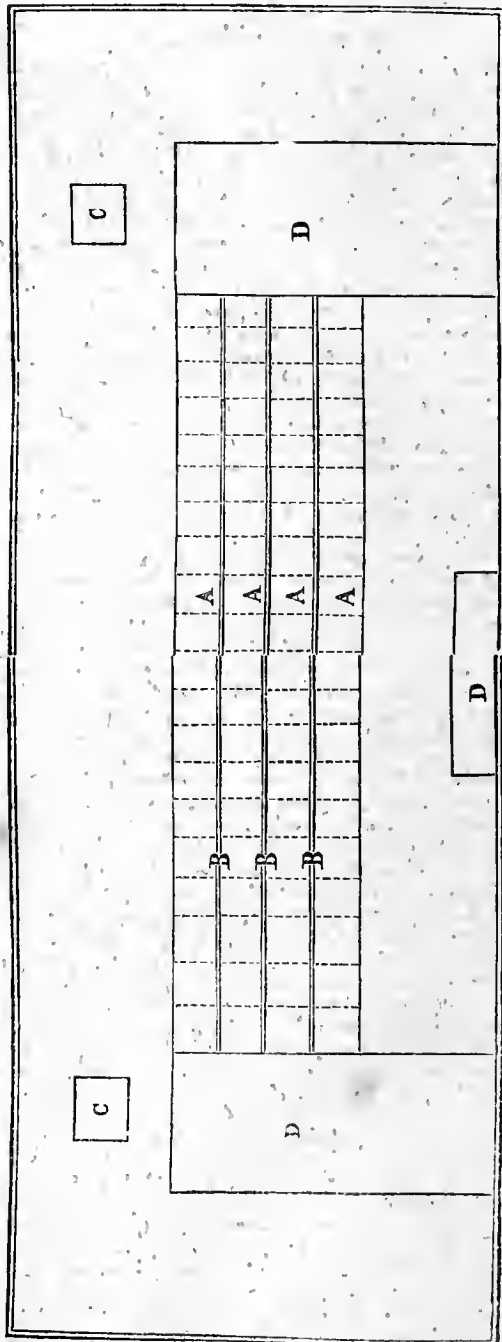


FIGURE I.

The building is designed to be 12 feet wide, 10 feet high in front, 4 feet high in the rear, and 50 feet long. The length may be greater or less, with refer-

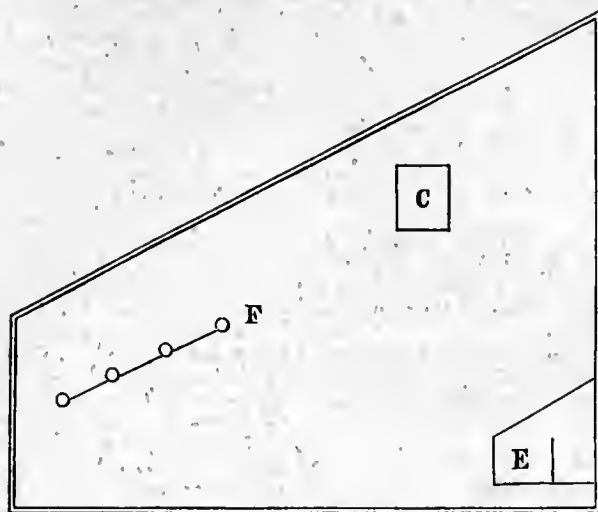


FIGURE 2.

ence to the number of Poultry to be accommodated. The above dimensions are large enough for 150 to 200 barn door fowls. The materials for rear and ends may be frame, brick or stone. The south slope of an embankment will be a good location, as warmth is an important point to be gained. The best material for roof is straw thatch; this is warm in winter and cool in summer.

FIG. 1, represents the front view. A A A A are glass lights 8 by 10 inches; the dotted lines show where the edges of the glass meet each other. B B B are boards three inches wide, nailed horizontally to upright posts, the upper edge being plowed to receive the lower end of the glass, and the lower edge rabbeted to receive the upper edge of the range of glass immediately below, which is secured by putty. This arrangement is original and saves the expense of sash. C C, ventilators, may be made to slide in grooves, or hung on hinges. D D D, doors: If the length of the building does not exceed twenty or thirty feet, one of the large doors may be dispensed with. That portion of the front not composed of glass and doors to be weather-boarded. It will be better if the inside of all the walls are plastered.

FIG. 2, represents an end view. C, ventilator, E, nest boxes, 5 feet long, and 2 feet wide, entrance open at both ends, with a sloping lid hung on hinges for the purpose of taking out eggs. Each box to be divided into five compartments, with an open passage next to the wall, the whole length. These boxes to be placed against the front wall, immediately below the glass; also across each end. F represents the ends of the roosting poles, four ranges of which, to run the whole length of the building. These poles should be 16 inches apart.

The space between the nest boxes and roosting poles is intended as a winter promenade and for feed-

ing and watering troughs. The object to be obtained by so much glass, in front, is warmth by the sun in winter. A clever yard should be attached for an out door range in fair weather.

Construction of Ice Houses.

A house to preserve ice during our long dry summers, should be built with care, but need not be very expensive.

The best soil on which to build, is one that is sufficiently porous to allow the water to leach through without the necessity of using a drain, as this makes way for a current of air which tends to equalise the temperature within, to that without. If the soil requires a drain, the outer end should be closed up that air currents cannot penetrate the interior.

Choose a shady situation if convenient, and if the soil is porous, excavate three or four feet, ten or twelve feet square, lay down scantling and cover with rough boards for a floor. Upon this erect the studding 2 by 8 in stuff 8 feet long, at distances of 3 feet apart, if inch boards are used for cover. The covering boards should be well seasoned so as to make tight joints. The outer wall, as high as the surface of the ground, may be nailed on the studs before they are set down upon the floor. Board up on both sides of the studs to the top, and back the earth around the outer wall, leaving it to descend in all directions to carry off the surface water; then fill up the space between the boards (8 inches) to the top of the wall (8 feet) with fine charcoal, dry saw-dust or tan bark well packed down. When the space is filled, nail a strip of boards nicely over the top to prevent rats or mice from burrowing within. Upon this the rafters may be allowed to rest or the roof may be made of whole boards, running up to the ridge, and battened; in either case the roof should project well over the wall on all sides. The entrance door should be on the north side, no larger than is absolutely necessary—say 2½ feet wide and 4 feet high. The entrance should be protected by double doors, the outer one opening outwards the other inwards, each set flush with their respective walls, and fitting closely, leaving an air chamber of 8 inches between them.

When all this is done it will pay to set another

course of studs outside the building, and cover with thin boards, fitted closely, leaving an open space between this and the first building. In any event it is advisable to place a second roof of rough boards, 8 or 10 inches above the first. Small sliding doors may be put in each gable, for ventilation, in case foul air should be generated by any means within. Fine clean shavings of pine or other resinous wood will be found most reliable for covering the ice; a thin coating of these may be laid upon the floor also, and also at the sides.

If the soil upon which the Ice House is desired to stand, is impervious clay, the whole may be built above ground, taking care to shut out a circulation of air below the floor, and at the same time to allow the water to pass off freely.

The more ice is secured in a body, the longer will it keep from melting, for this reason it would be a matter of economy for several neighbors to join in putting up a building to be used in common.—*Ohio Cultivator*.

The Guano Islands.

Capt. Congdon, of the barque Harriet Thornton, recently from the China Islands, communicates to the Providence Journal, a very readable account of the Islands, the shipping that frequent them, the mode of loading the vessels, and the kind of life there, from which we make the following extract:

"Vessels all load at the lee side of the island. At this time the guano has been removed from the edge of the Island in places, say one thousand feet. Rails are laid and cars used to bring it to the edge of the rocks and dump it into large bins or shutes made of long poles interwoven with ropes and chains to support them, wide at the upper ends and narrow at the lower. These hold from one hundred to five hundred tons. At the lower end are gates or scuttles, and from these gates are canvas bags, of about two feet in diameter, leading to the ships and boats below. The ships are hauled close to the rocks and moored off and on. The hose are led at once into the hatch, the gates above are hoisted, and you can imagine the force with which it comes down through this hose of one hundred feet. A thousand ton ship can be loaded in forty-eight hours. Smaller bins are used by the boats, which all prefer, as we have much less dust. A ship under the spout or hose is completely enveloped in a cloud of dust, making it almost impossible to exist on board. The guano is trimmed away in the hold by natives with oakum tied over their mouths and noses, and veils over their eyes. This lets in air and excludes the dust. They can only stay below from twenty to thirty minutes. They are in gangs of eight or ten, and relieve each other as above. Every part of the vessel is penetrated with this dust. It will go wherever smoke will. I can compare it to nothing but so much dry ashes. The guano abounds in hartshorn, and is said to be very healthy and beneficial in some complaints.

The vessels are all of one color from truck to water. Not a spear of grass, rush or reed, is to be seen anywhere; no vegetable matter of any kind on the islands. Where the guano is now removed is a perpendicular bank of about one hundred feet. In it are found dead birds, some even on their nests with eggs under them. I have several of them perfect in shape, still pure guano. Most of them crumbled to dust when exposed to the air. Layers of reeds and twigs are to be found through the guano, said to be brought there from the main land by the birds, for their nests. As we walk over the Islands

we find holes innumerable. These are the habitations of the birds. With daylight they go seaward for food, and return with darkness to spend the night on the islands. They are of various kinds—pelicans, penguin, many of the duck species, &c. Seals and sea-lions are seen in thousands sporting among the rocks and ships, and basking in the sun. Methinks I hear you say what a place for gunning, and you will no doubt be surprised when I tell you I have not discharged my gun since I sailed from New York. The laws here are very rigid; not a gun or pistol is allowed to be fired on or around the islands or on board ship. A penalty is exacted for every bird killed; this has caused much trouble here.—Still parties go on shore nights and rob the holes of their inmates, generally two birds, something like our mackerel gulls. They are said to eat very well, but rather fishy. We find eggs at times in abundance, yet these we are not allowed to touch.

The laws are strictly enforced; not even the seals or sea lions are we allowed to shoot; but I am hard tempted at times. I sometimes use my harpoon as they swim around the ship, but when fast it is impossible to hold on, as lookouts are stationed all around, and scarcely a day passes without trouble in some quarter. Every vessel that comes here has a certain number of lay days—about ten days for every one hundred tons. Most of us have to lay here our days out. At daylight dozens of boats can be seen about the spouts waiting for loads. Daily accounts are kept of each ship's days and turns; so many loads per day are allowed them—say first week two loads per day, second week three loads per day, third week four loads per day. We are all supplied with boats. They hold from ten to twenty tons, and are generally ships' long boats, sold to Peruvians when they leave for home. Laborers cannot now be hired here at any price; we can only work our own men.

One would imagine that it would be impossible to exist in the clouds of dust. The men are all of one color—you cannot tell a white one from a black one when at work in it. It is fun for our sailors. As a general thing, I never saw a set of men more interested for their employers than they are in loading our boats. They lay in it, roll and wrestle in it, and at times are completely buried in it. These shutes that lead into the vessel's hold are dangerous. Cases have occurred where men have slipped in at the mouth of the hose as the guano went in or down, and never seen again, or dead if found at all. At times where there is much surf on, I have seen the hose come out of the hatch and the guano go thirty feet from the side of the vessel, the bigness of the hose. We are supplied twice a week, Wednesday and Saturday, from Pisco city, with fresh meat, vegetables and fruits, by boatmen, who make quite a business of it. Fresh beef eight and a half cents per pound, fowls ten dollars per dozen, turkeys twenty-four dollars per dozen, pigs weighing twenty pounds three dollars, sheep four dollars each. Vegetables are high: enough for one week's consumption, for a crew of fifteen, say two dollars. Every thing in the way of provision is high."

How to Keep Harness in Order.

The subject indicated by the above heading has been discussed of late in the *Rural* by two or three correspondents, but is of sufficient importance to bear further comment. With all due deference, we are constrained to express the opinion that few of those directly interested give proper attention to the dura-

bility and appearance of harness, carriages, &c. We will therefore give the mode of oiling and washing harness practiced by one who is qualified to speak understandingly upon that subject.

Observing the good condition and fine appearance of the harness of Ald. Baker, proprietor of the most extensive livery establishment in Rochester, we requested him to impart to us, for publication, the *modus operandi* by which so desirable a result was achieved. In compliance therewith, he stated the course adopted as the best and most economical, after twenty years experience in a business which required considerable attention to tackling apparatus. His process of oiling and washing harness is substantially as follows:

Take Neats' Foot Oil, and Ivory or Patent Black—the latter well pulverised or to be made so before using. Mix thoroughly—adding the black until the oil is well colored or quite black. In cool weather the oil should be warmed somewhat before mixing. With a sponge apply a light coat of the mixture—only what the leather will readily absorb, unless the harness is very dry, in which case a heavier coating may be necessary. After the harness is dry—which will be in from two hours to half a whole day, depending upon the weather and previous condition of the leather—wash thoroughly with soap suds. In making the suds use good Castile soap and cold rain water. (Warm water should never be used on harness leather.) Apply the suds with a sponge. Rub off with buckskin. This will give your harness a nice, glossy surface, and the leather will retain a good color and continue pliable for months. If it becomes soiled with mud, or sweat, an application of soap and water, as above directed, (without oiling,) will be sufficient to give it a bright appearance.

Two applications of this oil and black mixture a year (or once every six months,) will be sufficient to keep harness, as ordinarily used, in good order. It may be necessary for livery men, and others who use harness constantly, to apply the oil oftener—but in most cases two oilings a year, and washing with suds when soiled, will keep a harness in good trim for sight and service. This process will pay a large dividend in extra service and durability,—to say nothing of improved appearance.

Ald. B. assures us that the same, or a very similar application, is just the thing for carriage tops which are made of top leather. The only difference in treatment is, that less oil should be used, or rather a lighter coating should be applied—and it should be washed off before drying in, top leather being thin and much more penetrable than harness. Of course this mixture would not answer for enameled leather, of which some carriage tops are constructed.—*Rural New Yorker*.

Construction of Pig Pens.

Among the very valuable works for the farmer issued by Saxton, the indefatigable agricultural bookseller of New York, is the Progressive Farmer, by Nash. Price only 50 cents. We extract from it the following excellent article on Pig Pens and the management of Pig Manure:

318. Mythology relates that one King Augeus had stalled 30,000 cattle for many years without cleaning after them. Hercules, it is said, was appointed to the task of cleansing these "Augean stables." The wily hero, as the story has come down to us, to find a river through them, and made clean work shortly. Whether the stalls travelled with the current, we are

not informed, but the manure went down stream. Agriculturally considered, this was just about as wise as the management of some modern pig-pens.

219. I have often seen these important structures built with their roofs facing the south; the manure thrown out the south side; the eaves washing it in rainy days, and the sun scorching it in fair weather; till, between washing, and fermentation, and burning there was little left. Others are so located, that rills, if not rivers, run into them, not enough perhaps to cleanse them, after the model of the aforesaid "Herculean labor," but enough to sweep away nearly all of their soluble salts. Owing to bad management, pig-manure has come into bad reputation, but it is good, nevertheless, if rightly managed.

320. The pig-pen should be so constructed that the eaves will be turned away from the manure.—The ground should be in such shape that no water, except what falls directly from the heavens, can find ingress, and none find egress but by evaporation. There should be an outside enclosure, where the animals can be as filthy as their swinish nature prompts; and an inside apartment, where they can be as dry and warm as they please. If the first is not allowed them, they may not pay for their keeping in summer; if the last is not furnished, they certainly will not pay for their winter's food. No animal can grow or fatten when suffering with the cold. It takes all his food to keep him from freezing.

321. Let the outside enclosure be of considerable size, giving at least one square rod to the first tenant, and half as much more to each additional occupant. It is agreed on all hands that American farmers have land enough. They can afford to give their pigs a sufficient range. The ground should be disking, the same as in the barnyard, and for the same reason—that nothing may run over in wet weather; and the materials for the pigs to work over should be so abundant as never to evaporate to dryness in the driest times.

322. Now, what is to be done that a lot of swine may produce, partly in the "natural way," and more by the manufacture of raw materials, ten loads each, per year, of excellent compost? If the number to be kept be ten, this would give a hundred loads. Suppose this to be the average number for the year, and let us see how the thing is to be done. In the first place, put around the outside of the pen, or outer yard, seventy-five loads of peat, swamp muck, road-scrapings, top-soil, or whatever you can best procure, and then proceed as follows:

323. After the pen has been cleared of its last year's manure, throw in plentifully of this to begin with. Lest it be scattered over the whole enclosure several inches in depth. As it becomes thoroughly moistened with rains and the droppings of the animals, throw in more, and so on, through the summer and fall, throwing in, more or less, nearly as often as you feed the swine, taking care that it always be moist, but seldom or never thoroughly drenched.

The quantity will soon become so large that it will hold the water of any ordinary rain, and withstand the evaporation of any drouth, if not very severe. If it inclines to dry up, it is well to throw over it a few quarts of plaster. Plaster is very little soluble. Five hundred lbs. of water dissolve but one lb. of plaster. It cannot, therefore, be lost by putting it on moist manure, as some other salts might be. Indeed, it should be sprinkled over all manures frequently, but especially if they incline, either in consequence of dry weather, or of too rapid fermentation, to become dry.

324. Some have supposed that the outer pen for swine should be under cover. I think not. Remember that rain does not hurt manure, unless it run through it, carrying off its soluble salts. Every drop of rain brings down ammonia and other fertilizing matters from the air. The falling rain washes the air of its impurities. After a shower, we say, "How sweet the air is." It is sweet, because it is *clean*. Hence, in the neighborhood of cities and large villages, and everywhere, to a limited extent, rain falls, impregnated with enriching materials. If it falls on a quantity of manure, which has sufficient depth to hold it, till evaporation takes place, it leaves these materials in the manure. Hence, the more rain the better, provided it go off by evaporation, and not by filtration. The evaporation should not go on to perfect dryness, for then the ammonia, the carbonic acid, and other gases, are inclined to escape, and the manure is approaching that state in which it may be said to be "burnt."

325. *Always moist but never leached*, should be the farmer's rule for his manure. The more manure he makes, both in his cow-yard and his pig-pen, the more easily can he keep within this rule. A few inches of manure, spread over the yard or pen, will be dry as powder one day and thoroughly leached the next; while a depth of ten, fifteen, or twenty inches, will stand a long drouth, or hold the water of a long rain. Consequently, it generally happens to the farmer who makes manure on a liberal scale, that his manure is as much better in quality as it is more in quantity.

326. I have said, *always moist but never leached*. Closely allied to this is another rule. Who has not noticed that a pig-pen, in which the occupants are in danger of drowning, and one in which the manure is so dry as to be suffering a rapid fermentation, always smell horribly? To say nothing of the keeper and his family, the pigs themselves are less healthy in such an atmosphere, and they will thrive less on the same keeping. To keep a stinking pig-pen, is to throw away part of the feed and part of the manure at the same time. By giving corn to swine, shut up to a polluted atmosphere, the farmer loses a portion of his last year's crop; and, by letting his pig-pen "waste its sweetness on the desert air," he fails of a portion of his next year's. A valuable portion, and not a small portion, of what should produce crops next summer, is going beyond his reach.

327. *Not the least offensive odor should escape from the pig-pen*. This is the rule before alluded to; and it is as practicable as it is important. To practice it, will save something on the last year's crop; something for the next's; something *certainly* in comfort; and, *it may be*, something in doctors' bills. In order to practice it successfully, one needs only to throw into the pig pen, and all like places, including the vault of the necessary, plenty of peat, black mud, or top-soil even, and to see that it is always moist, but not drenched. A little plaster would be a help, but is not necessary. If it is not at hand, the other part of the prescription will suffice. Plaster, however, should always be on hand. This, and cured peat, or muck, should never be wanting about the farmer's premises.

328. The same rule should be observed with regard to every part of the premises. If others suffer bad odors about their farms, they may lose their comfort and their health; i. the farmer suffers them, he will lose his *wealth* also; for these are the very quintessence of his manures; and it is a singular, but well known fact, that growing plants absorb with avidity what is most noxious to animal life.

Culture and Value of the Parsnip.

As one who has lived twenty years upon a farm, searching all the while for *reliable* information, both from his own experience and from that of others, ought to be in possession of some "fixed facts" and settled opinions; and as duty, propriety, and fraternity require that we should allow others the opportunity of benefitting by our experience, I feel moved to give you a few items of information which I think very satisfactorily settled by evidence within my own observation.

Disliking long prefaces, and trusting that all your correspondents, will dispense with them, I commence the brief summary of my experience and observations of twenty years, by a statement in regard to the value of parsnips.

PARSNIPS FOR HOGS.—One of the things which I consider well settled, and a reliable and useful item of knowledge, is this: that parsnips, either raw or cooked, but preferably cooked, with the addition of apples, potatoes, &c., occasionally, were it only to prevent the appetite from being cloyed by "eternal sameness," constitute the best kind of food whereon to fatten a hog. They are also the best kind of roots for milch cows. Both hogs and cows eat them with avidity, and to the milk and butter they communicate a good delicious flavor. I have seen it stated some years ago that beef made from parsnips brings the highest price in the London market. I think, though I may be deceived by imagination, that pork made from feed chiefly composed of parsnips, is sweeter than when made from anything else.

This is not the only recommendation which may be justly bestowed on the parsnip. Among its other good qualities is this—that it requires no care or housing in the fall, as all other roots do. In all the middle, northern and western states, potatoes, carrots, and turnips, must be harvested and housed, or buried; and even when all this is done, and with good care and judgment too, a portion will frequently be ruined and lost by frosting, over heating or decay from other causes. Parsnips, on the other hand, requiring no care in the fall, they may be left without injury in the ground all winter. They may also be planted early in the spring, as the frost does not injure them, even at the earliest stage of their growth, so that this root crop interferes the least of any with employments which crowd upon the farmer in the spring and fall. It continues to grow through the whole season, until the ground freezes in winter; it requires no expenditure to gather or store it; it may be taken up on several occasions during the winter, and the roots that stay in the ground *all* winter, are not injured, and probably improved, by the frost. Parsnips seem to be eaten with more relish than either turnips or potatoes, and yield in the raw state, at least a greater amount of nutriment.

Another advantage in cultivating parsnips is, that on a suitable soil—sand or loam, rich or well manured, and deep plowed—a large growth may be secured. At the rate of 1,200 bushels have been gathered from one acre of ground.

Parsnips may be planted either in spring, or in the latter part of summer, say in August or September. The ground should be well manured, mellow, and deeply plowed and the seed sown in drills, so as to have plants to thin out, while preserving them at about eight inches apart. This will probably require at about the rate of two pounds seed to the acre. The drills should be two feet apart and the space between well cultivated and kept clear of weeds, if sown in spring the earlier the better. A large

growth may be secured, however, by sowing the seed in September. There will be some considerable growth before the ground freezes up, and the growth will commence again as soon as the frost leaves the ground in the spring, which will continue throughout the whole season, of about twelve months; whereas, when sown in the spring they can grow only eight or nine months.

All the advantages of this root crop have not yet been named. Among them are these—that they seem uninjured by either a wet or a dry season, and that no insect nor bug attacks them at any stage of their growth.—[*Working Farmer*.

Reports of State Exhibition.

The following reports of our late fair at Pittsburg have only just reached us.

Farm Implements, &c., No. 20.

1st Premium to Atkin's Automaton reaper, diploma and	\$20 00
2d premium, Wm. J. Hayatt, self-reaping and mowing machine,	10 00
C. M. Russel, sweep horse power,	5 00
B. Billers, do. do. do.	5 00
1st E. R. Shankland, railway horse power,	10 00
2d M. M. Stever, do. do. do.	5 00
Best hay press, Wm. W. Dingee,	10 00
2d best do. Deering & Dedrick,	5 00
Best dog power churning machine,	5 00
2d best do. do. do.	5 00
Best portable saw mill, Emery's patent,	20 00
2d best do. do. Andrew Kalston,	20 00
Best do. chopping mill, J. D. Owens,	5 00
Best pump for wells, H. J. Criswell,	10 00
2d best do. do. E. A. Jeffrey,	5 00
M. Baily, for a hydrant,	5 00
George Baily, for iron pump,	5 00
Best hay and cattle scale, to Livingston, Roggen, & Co., Diploma and	10 00
Best weighing machines for general purposes, Livingston, Roggen & Co.	5 00
Best small and large scales, Livingston, Roggen & Co.	5 00
Best small scales to Edwards, Morris, & Co.	Diploma.
Best portable cider press to W. O. Hickok, Diploma and	10 00
2d best to E. R. Shankland,	5 00
Best lime spreader, M. P. Cooper,	5 00
Best and most numerous collection of agricultural implements, to E. R. Shankland,	25 00
2d best to James Wardrop,	20 00
Best separator to John Gill,	Diploma.
Best seed sowing machine, J. M. Barret & Co.	Diploma.
Best lawn grass hoe, James Wardrop,	2 00
2d cylinder churn, do.	2 00
Best washing machine, D. P. Lowrie,	5 00
2d do. do. J. R. Morrison,	3 00
Best and largest collection of Horticultural implements to James Wardrop,	10 00
Best bacon ham to Morgan Jenkins,	5 00

Plows.

Best one horse plow, Hall & Speer, No. 2,	10 00
2d do. do. Robert Hall,	5 00

Sub-Soil Plows.

Best sub-soil plow, E. R. Shankland,	10 00
E. R. Shankland for steel point plow,	5 00

A discretionary premium of \$8 to Hall & Speer, for iron hill side plow, No. 11.

A discretionary premium of \$8 to John S. Hall for extension drill plow.

The report of a committee, No. 34, on miscellaneous articles not having been acted on by the executive committee, will not be made known for a few days.

Report of the Committee on Poultry, No. 15.

The Committee in submitting the following report, congratulate the Society upon the very large and beautiful display of poultry on exhibition.—Most of the fowls give evidence of careful breeding, showing a commendable feeling of interest, in regard to this department of domestic agriculture. The earliness of the season, and the fact that a large majority of of the fowls are of the present year's raising, have rendered them less attractive in plumage, and prevented that fine development of size, so marked a feature at the last exhibition.

From the immense number of fowls, the neglect to number the coops in regular numerical order, and the almost total disregard of system on the part of some of the exhibitors, in cooping and arranging them, have all served, not only to largely increase the labors of the Committee, but to prevent as complete a report as would otherwise have been prepared.

These defects in the present arrangement will, the committee hope, be a sufficient apology for the general character of the report, as well as serve to correct the evil at the future exhibitions. Had each coop been properly numbered, the particular fowls to which the regular premiums of the Society have been awarded, as well as these for which the committee recommend special or discretionary awards, would have been more readily recognized by visitors, and the intentions of the committee more fully understood. Regretting the inadvertence, the committee beg leave to submit the following awards of premium:

For best lot <i>Shanghais</i> , to Dr. A. H. Gross, 1st premium,	\$3 00
2d best, to S. C. Radford, 2d premium,	2 00
For Dorkings, best lot to Wm. Leonard, 1st premium,	3 00
2d best, Wm. Boyd, 2d premium,	2 00
The display of Dorkings was very meagre.	
Best lot of Poland Fowls, 1 cock and 2 hens, to Wm. Leonard, 1st premium,	3 00
2d best, to D. S. Williams, 2d premium,	2 00
For best lot Black Spanish, 3 cock and 2 hens, to T. W. Moore, of Lewistown, Pa., 1st premium,	3 00
2d best, T. P. Updike, 2d premium,	2 00
For best lot of Jersey blues to H. Ingraham, 1st premium,	3 00
2d best R. McKnight, 2d, premium:	2 00
For best lot Cochins, 1 cock and 2 hens, James Gillespie, West Philadelphia,	3 00
2d best 1 cock and 2 hens, R. C. Walker, 2d premium,	2 00
Chittagongs, best lot of 1 cock and 2 hens, David Taggart, brown variety, Northumberland, Pa.	3 00
Dr. J. Crabb, equal to the above,	3 00
T. B. Updike, for grey variety,	3 00
For Best lot of Bantams, (White,) to J. S. Snyder, 1st premium,	3 00
2d best, to Mrs. Margaret Murdoch, 2d do	2 00
Speckled bantams, D. Taggart, 1st premium,	3 00
R. W. Patterson, 2d premium,	2 00

Black African Bantams, William Leonard,	3 00
Black Spanish Bantams, Wm. Leonard,	2 00
Golden Seabright Bantams, T. B. Updike, 1st premium,	3 00
William Leonard, second premium,	2 00
Both fine specimens.	
Game Fowls, best lot, 1 cock and 2 hens, David Taggart, 1st premium,	3 00
Jonathan Dorwart, 2d do.	2 00
Native or Dunghill, best lot of five, Jonathan Dorwart, 1st premium,	3 00
For the best lot of Poultry, Jonathan Dorwart, of Lancaster,	10 00
2d best, Dr. A. H. Gross,	8 00
Largest collection of Fowls, Wm. Leonard,	10 00
Greatest variety of Fowls, David Taggart,	10 00
Best Capon, Wm. Leonard,	3,00
Turkeys, best pair, J. O. Denny,	3 00

Geese—Two of the committee refer with pleasure to the superb specimen of *Amoor Geese*, exhibited by A. T. Newbold of Philadelphia. They are a new variety, and in view of the commendable spirit of Mr. N. in introducing these fine fowls in the United States, the committee award a special premium of *ten dollars*.

It is due to Mr. Newbold to lay this award was made by the majority of the committee, without his knowledge.

Bremen Geese, best pair, R. W. Patterson,	3 00
A. H. Gross,	2 00
Muscovy Ducks, David Taggart, (Winter Variety,)	3 00
R. McKnight,	2 00
Common Ducks, best pair, David Taggart, 1st Premium,	3 00
L. C. Radford, second premium,	2 00
Poland Duck, S. C. Radford,	3 00
W. Grier,	2 00
Aylesbury Ducks, 1st premium, S. C. Radford,	3 00
W. C. Denning,	2 00
Pea Fowls, best pair, J. S. Negley,	5 00
Pigeons, G. W. Felix, best exhibition,	3 00

In addition to the above, the Committee respectfully recommend the following premiums for varieties not recommended in the schedule:

Aramah Pootras, or Grey Shanghais, to J. S. Negley, A. H. Gross, David Taggart, J. P. Updike, W. Greer, James Crabb, S. C. Radford, R. W. Patterson and Wm. Leonard, each a premium of	\$3,00
Spangled Poland Fowls, to Jonathan Dorwart, David Taggart, and A. H. Gross, each a premium of	3 00
White, Brown and Black Javas, David Taggart,	3 00
Creepers, to Wm. Leonard and David Taggart, each,	3 00
Frizzled Fowls, David Taggart and William Leonard, each	3 00
Bolton Greys or Creoles, David Taggart and J. Dorwart, each	3 00
Silver Hamburg Fowls, Wm. Leonard,	3 00
Black Shanghais, W. Grier, J. Dorwart, R. W. Patterson and S. C. Radford, each,	3 00
Spangled Shanghais, to Jonathan Dorwart,	3 00
Devonshire Raven, Games, to J. Dorwart,	3 00
Dominique Shanghais, to Dr. J. Crabb, superior specimens,	3 00
Silk Fow, buff variety, to Dr. J. Crabb, Wm. Leonard and S. C. Radford, each	3 00
Cochin Chinas, to J. Gillespie, Aaron Clements, J. A. Measonkop, R. C. Walker, S. C. Radford, R. M. Pringle, R. W. Patterson, G.	

W. Felix, J. Dorwart, J. W. Chadwick, and J. Crabb, each,	3 00
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The Committees would state that the displays of Cochin China Fowls by the exhibitors above named were not only large, but truly excellent, especially those exhibited by Messrs. Gillespie and Aaron Clements.

Black Spanish, to R. M'Night and W. Leonard, each	3 00
White Shanghais, to Aaron Clements, R. C. Walker, J. D. Denny, W. Tite, W. Boyd, A. H. Gross, G. W. Felix, each	3 00
For Buff Shanghais, to David Taggart, Lamborn & Bro., Dr. J. Crabb, Wm. Leonard, W. Tite, S. C. Radford, J. O. Denny, A. H. Gross, Ira Sherwin, each,	3 00
For Hoang Ho Fowls, to A. H. Gross,	3 00
For Sumatra Pheasant Game, to A. H. Gross,	5 00
For white Poland Fowls, to Dr. S. Williams,	3 00
For Game Fowls, to Adam Wilhelm,	3 00
For Speckled Bantams to Wil on Inglis,	3 00
For White Bantams, to W. C. Denny,	3 00
For Muscovy Ducks, to W. C. Denny and Caleb Lee, each,	3 00
Silk Fowls, buff variety, to Dr. J. Crabb, Wm. Leonard, and S. Radford, each	3 00
Silk Fowls, white variety, Wm. Leonard, and S. C. Radford, each,	3 00
Silk Bantams, Black, Wm. Leonard,	3 00
Polish Albinos Fowls David Taggart,	3 00
Hybrids Ducks, Caleb Lee,	3 00
Pheasant Bantams, S. C. Radford,	3 00
Madagascar Rabbits, John Elchar,	3 00
S. S. Negley,	3 00
English Ferrets, Robert Douglass,	3 00
Mouse-Catching Owl, (well trained,) J. B. Poor,	3 00
Poland Ducks, D. Holmes,	3 00

In view of the pains taken by many of the exhibitors not only in breeding but in offering fine displays of fowls, the committee also recommend the following special premiums:

J. Gillespie, James Crabb, S. C. Radford, Lamborn & Brother, G. W. Felix, R. H. Patterson, J. O. Denny, T. B. Updike, J. A. Mesenkov, Wesley Green, R. C. Walker, R. McKnight, W. C. Denny, S. Nedley, Aaron Clements, Wm. Tite, each, \$5 00

The committee also examined a *movable Lever Coop*, exhibited by Messrs. Lamborn & Brother, of Chester county, for which they recommend a premium of \$5 00.

In conclusion, in order that a proper estimate of the display of fowls may be made, the committee state that the number on exhibition was *nineteen hundred and sixty-nine*.

A. T. NEWBOLD,
WM. P. ELLIOT,
A. M. SPANGLER,

Cure of Founder in Horses.

Having had a little experience in curing the founder in horses, I take this method to give you a fact that you may give it to others through the columns of your valuable "Journal." It may be of great service to some, and save many a fine horse from premature death and much suffering.

The fact I shall give you, is of a horse worth three hundred dollars because of his fleetness. He came to my hand in August, about eight o'clock in the evening after being driven only twenty-nine miles with only two persons in a very light and easy buggy. The horse for some time had been fed all the grain he would eat. For two or three days he had not liked

his grain, but the night before he came to my hand he had eaten to the full of all he had liked; and when he came he was so stiff he could not step over a six inch pole, and when he attempted to turn round would nearly fall. I put him into water nearly knee deep, and kept a wet blanket on him nearly all the time for four hours, then put him into the stable, and put another blanket over him and left him for the night. The next morning I found him sweating; took him to the stable and rode him a mile, led him back, and put him in the brook again for an hour. During the day I exercised him about five miles, and about sunset let him stand an hour in the water, and again in the next morning.

About nine o'clock he was started on his journey of forty-two miles, and performed it with ease before sunset; he laid over one day, and went home the next, forty-five miles, and was returned to his owner, and he being a farrier, sold him in a few days, perfectly unable to describe any difficulty or damage done to his horse, being ignorant of what had happened. The horse was allowed all the food and water he wanted as usual he was not bled in any part, neither was there anything given to him except his usual food. The second day he was as limber as he ever was, and shown no injury from his founder since.

If you think this worthy of your notice, and wish it, I will give you my opinion of the founder and its cure.—[*Water Cure Journal*.

Mules and Horses.

It is thought by many that mules for the purpose of farm work, would be preferable to horses, because they eat less, are tougher and hardier, and live longer. It is true that with us the greater part of farm labor that requires draft, is performed by oxen, and we are well persuaded that nothing can be substituted for them, that, taking everything into consideration, will be so profitable. In warm countries the mule is probably better adapted to the climate and mode of work. Still, horses are much used among us in agriculture, both in conjunction with oxen, and alone, and if the mere drudgery of the farm be the only use, and there be no desire for a swift roadster, or an elegant nag to sport with, we are inclined to think the mule would be the most profitable.

We have raised them and used them, and can testify to power of endurance, and durability of life.

As a little calculation on this subject may be amusing if not satisfactory to some of our enquiring and calculating readers, we will give the figures of a writer in the *Southern Planter*, on this subject—He says—

Ten horses will consume each 12 barrels of corn per annum worth on an average, \$2.50 per barrel, which for 20 years will be	\$6,000
Shoeing ten horses at \$3.00 each per annum, will be for 20 years	600
Cost of shoeing and feeding 10 horses 20 years	\$6,600
Ten mules will consume each 6 barrels corn per annum, worth on an average \$2.50 per barrel, which for 20 years,	\$3,000
Shoeing will be nothing,	
Amount saved in 20 years by mules	\$3,600

This calculation will do for the South, but with us the mule must be shod, and corks kept sharp or he will tumble down and break his neck.

Another item might be put in, and that is, a greater exemption from disease, and the longer life the mule lives and remains active over what the horse

does. We never heard of a mule being killed by heat as horses often are.

TABLE,

SHOWING THE NUMBER OF TREES REQUIRED TO PLANT AN ACRE, FROM ONE TO FIFTY FEET APART.

Feet.	Trees.	Feet.	Trees.	Feet.	Trees.
1	43,560	18	134	35	35
2	10,890	19	120	35	32
3	4,840	20	108	37	31
4	2,722	21	98	38	30
5	1,742	22	90	39	28
6	1,210	23	82	40	27
7	889	24	75	41	26
8	680	25	69	42	24
9	537	26	64	43	23
10	435	27	59	44	22
11	360	28	55	45	21
12	302	29	51	46	20
13	257	30	48	47	19
14	222	31	45	48	18
15	193	32	43	49	18
16	170	33	40	50	17
17	150	34	37		

The Hog Crop of Ohio.

"On the first of October about one half of the counties of Ohio had furnished the Auditor of State's Office their annual statement of Personal Property listed for taxation in 1853. A comparison of these statements with those of the three previous years, shows the following relative number of hogs listed for taxation in the several counties named. Whether the Hog crop of the present year is really as much greater than former years as the tax returns would indicate, or whether a very large portion of the increase may not be accounted for by the discontinuance of the two hundred dollars exemption, are questions on which a divided opinion will exist."

The number of hogs listed for taxation in 41 of the best Ohio counties, were in

1850	-	859,442
1851	-	763,669
1852	-	696,031
1853	-	1,315,498

Novel way of holding a Horse.

A gentleman traveling through Germany, thus describes a novel method of fastening a horse, which he saw a German blacksmith put into practice:

"As soon as breakfast was over, I generally enjoyed the luxury of riding about town, and in passing the shop of a blacksmith, the manner in which he tackled and shod a vicious horse amused me. On the outside of wall of the house two rings were firmly fixed, to one of which the head of the patient was lashed close to the ground; the hind foot to be shod, stretched out to the utmost extent of the leg, was then secured by the other ring (about five feet high,) by a cord which passed through a cloven hitch, fixed to the root of the poor creature's tail. The hind foot was consequently very much higher than the head; indeed, it was quite exalted, and pulled so heavily at the tail, that the animal seemed to be quite anxious to keep his other foot on *terra firma*. With one foot in the heavens, it did not suit him to kick; with his nose pointing to the infernal regions, he could not conveniently rear, and as a heavy hand was constantly pulling at his tail, the horse at last gave up the point, and quietly submitted to be shod."—N. F. *Agricultor*.

Change of Timbers from clearing Lands.

There are few things connected with the natural history of trees or plants more surprising, or that have occasioned more speculation, than the changes that not unfrequently take place in the growth of timber after clearing, from what it was before the operation. So inexplicable is this change, in many instances, on the commonly received principles of vegetation; that it has been adduced by the believers in the doctrine of spontaneous production, as one of the strongest supporters of their system. We think, however, that, singular as the phenomenon may be, its solution cannot require a supposition so unphilosophical.

In the Southern States, where timber is principally pine, when that is cleared off, a growth entirely different, and composed of such as was entirely unknown to the place before it, springs up; and this, when cut off, is succeeded by new varieties, or perhaps by a return of pine. Lands covered with oak and chestnut, or such timber as shoots up from cut trees do not change the timber except in a small degree. It is on those lands covered with timber that requires to be propagated by seeds that this change is most apparent. Everybody must have noticed in what numbers a species of wild cherry will spring up where forests are cut down, or are propagated by winds, though that particular kind is rarely or never found growing in the unbroken forest.

More than thirty years since, a part of our farm was cleared of its timber, a dense growth of maple, bass wood and elm. A small piece of perhaps half an acre was separated from the rest by a narrow ravine; after being cultivated three or four years, and part of it planted out as a nursery of fruit trees, it was left to itself. It was soon covered with young trees, which were suffered to grow unmolested, and there are now on this small spot, white oak, black oak, butternut, white poplar, common willow, walnut, hickory and black cherry, of all varieties of which not one was growing near at the time it was cleared; and most of them not within three-fourths of a mile. An explanation we leave to others.—[*Warren Journal*]

Cut Your Ditches and Cut your Bushes.

Farmers are exclaiming "how dry it is!" True, it is dry, but you can't help it; and the best thing you can do is to take the best advantage of it that you can. Have you a bog or a low piece of land that you want to reclaim, and put into a profitable cultivation? Now is the time to ditch it—to cut off the bushes—grub up the "tussacs" and brake up roots, and put into complete order by purifying it with fire and sowing on a good supply of fowl meadow grass seed, &c.

Have you a muck or peat bed? Now is the time to draw a supply of material to increase your manure heap—or, if you have not time to haul it to your barn now, employ some good hand to dig out and pile it up in a situation where the water will not reach it, and during good sledding next Winter, you can get it up and have it ready for another season. The dry weather may thus be made useful to you. A farmer, by a little calculation, can find work appropriate for all weathers.—*Maine Farmer*.

PAINT YOUR TOOLS.—Every farmer should be provided with a small quantity of the easier kinds of paint—a few pots and brushes—and paint, oil, and should keep his carts, wagons, sleds, plows, harrows, &c., well coated with paint.

Turnips.

Turnips may remain in the field till late. They are far less injured by frost than many are inclined to believe. It is very often the case that turnips are frozen in the ground, and on the frost breaking up again in the course of a few days, are removed as hard and crisp as before. The action of the soil neutralizes its effects, and sometimes a succession of several weeks of warm weather, after a freezing night, adds as much to the weight and value of the crop as they gained in twice that time before the advent of severe cold. A low temperature is favorable rather than adverse to the development of all the species of the turnip tribe. Cabbages grow rapidly in cold weather; hence the practice so prevalent at present of allowing them to remain out till the snow falls. In packing turnips of all kinds, care should be taken to secure them effectually against the light and air. The more perfectly this is accomplished, the greater will be the certainty of their keeping well, and the more wholesome and nutritive will they be found, both for stock and for table use.—*N. E. Farmer*.

List of Patent Claims.

Robert A. Graham, of New Paris, Ohio, for Improvement in Ploughs:

I claim, first the screw bolt, or its equivalent, for setting out or in the rear edge of the mould board, with respects to the landside, acting in combination with the bolts E. and F., which being tightened, attach to each other, the mould board, sheath, and lipped or flanged share, as described, and which bolts being temporarily relaxed, permit the vibration of the mould board about the bolt, E, without interrupting the continuity of ploughing surface, or disconnecting the several parts.

Second, the shifting or adjustable socket attachment of the beam to the sheath, in combination with the dovetail and adjustable connection of the rear end of the beam to the helve, or equivalent devices, so as to vary the direction of the draught of the plough, to suit the requirement of a change in the flane of the mould board and other objects, as explained.

Thomas C. Hargrave, of Schenectady, N. Y., for Improvement in Corn Husking Machines:

I claim, first, the application of the chisel or chisels, and the cutter or cutters, in combination with the gate or gates, operated by gearing or other means, as described.

Second, I claim the construction of the circular plate or its equivalent, as described, in combination with the cutters for severing the cob, and the elbow lever for discharging the husks, as set forth.

Third, I claim the combination of a cam, lever and spring, with a stud for holding the circular plate stationary whilst removing the ear and husk from the machine, or any other equivalent, as specified.

Gardiner A. Bruce, of Mechanicsburg, Ill., for Improvement in Corn Planters:

I do not claim the dropping slide nor any peculiar arrangement thereof, as they are used in many drills, and are constructed and operated as described.

I claim the employment or use of the balance beams, with the rods attached to them, and operating as described, for the purpose of properly adjusting the seed in the holes of the dropping slide, and also to prevent the clogging of the same, as described.

Ephraim L. Pratt, of Worcester, Mass., assignor to James Sargeant and Daniel P. Foster, of Shelbury Mass., for Improvement in Machine for Paring Apples:

I claim hanging or connecting the block which carries the knife to the rod, which carries said block, so that the block and knife can vibrate in one or either direction, by means as described, so as to allow the knife to vibrate and accommodate itself to any irregularity in the surface of the apple or vegetable pared, as described.

Joseph C. Strode, of East Bradford, Penn., for Improved Hydraulic Ram:

I claim the application of the brachystochromous curve to the conduct pipes of hydraulic rams, as set forth.

Richard Ketcham, of Seneca Castle, N. Y., for Improvement in Straw Cutters:

I claim the method, as described, of hanging and operating the cutter by means of its pivoted attachment to the slide, in combination with a guide rod, the latter being made adjustable by the helical spring at the top, or other equivalent device, as set forth.

I further claim, in combination with the inclined reciprocating knife and simultaneously with the descent thereof, giving to the gauge a lateral curvilinear or oblique downward action away from the rear end of the knife.

Levi B. Griffith, of Honeybrook, Penn., for Improvement in Plough Beams:

I claim constructing a plough beam of four round iron rods, centre piece and clamps, in combination as described, the rods being of uniform size, from end to end, curved to the shape specified and welded together at the places designated, the centre piece and clamps held firmly in their position by the rods, as described.

C. R. Brinckerhoff, of Batavia, N. Y., for Improvement in Ploughs:

I claim, first, combining with the plough beam between the plough and the clevis, two wheels, one on each side of the beam and of different diameters, the one resting in the furrow, and the other on the land, as described.

Second, I also claim making the tread of the furrow wheel narrow for the purposes described.

I also claim making the said wheels, especially the furrow wheel, adjustable in the direction of its axis, for the purpose of adapting its position to furrows of different widths.

I also claim making the furrow wheel bevelling outward on the side which presses against the land, as set forth.

I also claim making the small wheel adjustable vertically with reference to the shaft and the large wheel, as described.

S. G. Dugdale, of Richmond, Ind., for Improvement in Opening and Closing Gates:

I claim, first, opening, closing, fastening, and unfastening the gate by moving the bottom of the gate in an oblique direction from and to the post upon which it is hung, as specified.

Second, I also claim the use of the pendulums and vertical levers and arms, in combination with the hinges of the gate, as set forth.

N. Harrison & J. W. H. Metcalf, of Bridgeville,

Va., for Improvement in Hill-Side Ploughs:

We claim curving downward and inward the beam in the rear part, so as to cause it to support the rotary part of the plough, which it performs in combination with the standard, as set forth.

Daniel Hill, of Barton, Ind., for Improvement in Attachment of a Harrow to a Land Roller:

I claim the arrangement and mode of attaching the harrow to the forward axle of a roller, as set forth.

T. B. Jones, of Carlvilleville, Ala., for Improvement in Cob and Stalk Cutters:

I claim the combination of the feeding trough, its gauge disc, the tube, and its gaugering, with the knives, whereby the same knife will, at the same time, cut fodder coarse and cobs fine, and thereby improve the quality of the product as feed for animals.

H. M. Keller, of Newark, Ohio, for Improvement in Winnowers of Grain:

I claim the trap door in combination with the screen, arranged and operated as set forth.

J. J. Parker, of Marietta, Ohio, for Improvement in Straw Cutters:

I claim operating both the reciprocating gate and the feeding rake by means of the compound spring pitman, substantially as herein set forth.

Samuel Snow, of Fayetteville, N. Y., and Alexander Hine, of Lafayette, N. Y., for Improvement in Rotary Root-Digging Cultivator:

We claim the combination of the two toothed cylinders with the receiving box, all being arranged and suspended on an adjustable frame in the manner set forth.

D. H. Whittemore, of Chicopee Falls, Mass., for Improvement in Vegetable Cutters:

I claim the combination of the long and short knives on the periphery of the cylinder with the hopper arranged and described as represented.

L. M. Whitman, (assignor to S. G. Wise,) of Weedsport, New York, for Improvement in Cultivating Ploughs:

I claim the employment of the long inclined spring-wings, secured at their front ends to the share and main standard, and turning upon the pin, in combination with the mechanical contrivances shown, for expanding and contracting the wings, or setting them more perpendicular and nearer together, for the purpose of throwing more pulverised soil against or up to the hills, or setting them less inclined to the horizontal plane, and further apart for the purpose of allowing the pulverised soil, weeds, &c., to pass over them into the board open spaces in the centre, the said wings in either case cutting up the weeds and pulverising the soil, as set forth.

William Zimmerman, of Quincy, Ill., for Improvement in Smut Machines:

I claim the machine described, for cleaning and scouring grain, hulling rice, pearling barley, hulling buckwheat, or otherwise operating upon grain, seed, &c., with a series of two or more stationary cones with one, two, or three, or more revolving cones placed and operated alternately between the stationary cones, the insides or outsides of part, or both sides of part, or all the cones being furnished with

roughened surfaces, of such a form or kind, as will perform the service required, substantially, as described.

Charles B. Hutchinson, of Syracuse, N. Y., for improvement in Machines for Joining Staves:

I claim first, the use of the circular guide ways, in combination with the moveable pins or bearings, and the cams or levers or other suitable means of moving the same simultaneously and equally along said circular guide ways, so that the saws or other cutters may be instantaneously adjusted for any required width of stave without stopping their motion or changing their direction towards a constant central point.

Second, I claim the use of the wing or leaf gauge, in combination with the index moving over a graduated arc or dial, both moving in connection with the saws, so as to indicate at a glance the width between the saws, and to guide the operator in setting the stave on its bed plate and in adjusting the saws.

Third, I claim the mode of jointing staves to any required bilge and bevel without bending or springing them by rotating them endwise, in a plane perpendicular to their width, between saws or other cutters, so inclined as to give the correct bevel, whether adjustable as above or not, said rotation being upon a circle or other proper curve, such as to present each part of the stave to the action of the inclined cutters at the precise point or height requisite to give it its exact proportionate width or bilge, the rotation being obtained by means of a central arch piece moving over rollers about a constant centre of motion, as described.

Benj. Rutter and Henry Rowzer, of Pique, Ohio, for Improvement in Smut Machines:

We claim the narrowing of the spout near the grain discharge, in combination with the curved passages, which receive and discharge at their respective apertures the light grain and trash taken from the grain discharge aperture.

On Raising Potatoes From Seed.

By William Parry, Burlington Co., N. J.

Having derived much pleasure and information from reading accounts of the experiments recorded in the Horticulturist, I feel it right to contribute what little lays in my power towards the general good, in part return for the benefits which I have received from the experience of others.

The potato being so valuable an esculent, every precaution should be used to extend its usefulness, by increasing the varieties and testing the merits of each, as well in quality as quantity produced, that those which prove superior, either in early ripening or adaptation to particular soils or climate, may be disseminated throughout the country, and those which are inferior be discarded from cultivation.

The usual mode of raising potatoes from the seed, by planting in the open garden, being tedious and requiring several years to develop their true characters, has deterred many from the undertaking. The seed require a long time to vegetate, and the growth being slow thereafter, noxious weeds and grass get the start and become very troublesome; the plants attain but a diminutive size early in the season, which is the most favorable time for their growth; the tubers do not set until the latter part of summer, when the dry weather and parching rays of the sun check their future growth, and tend to ripen the crop before it

has attained much size, so that the product of the first year is very trifling, and several years are required to ascertain the true qualities of the seedling.

The great object, then, is to get the plants so advanced in the spring, that the tubers may set and grow in the early part of summer, when the refreshing showers alternating with the genial rays of the sun are most favorable for their growth.

The plan that has succeeded well with me for several years past, is as follows: Soon after the ripening of the potato tops, I gather the balls of the Mercer potato, mashed them together, threw on a little water and left them a few days to ferment, when the seed were easily separated from the pulp and husk, and after being dried were placed away secure from frost or moisture, to remain until spring for planting. The latter part of the third month the seed were sown in a hot-bed under glass, the grains being sown a quarter of an inch asunder. From the middle to the latter part of the fifth month, the plants being three or four inches high, and frosty weather appearing to be over, on damp cloudy days or soon after a rain, the plants were taken up with a portion of earth to each and placed in loose rich soil, at about the same distance from one another as potatoes are usually planted.

The plants neither wilted nor showed any signs of suffering from transplanting.

It is of importance that they should be put down into the earth two inches lower than they stood in the seed bed; they will thus produce more roots; but care must be taken that the young plants do not produce tubers while they remain in the seed-bed, as they will be very much weakened if allowed to do so before they are put out. The earthing-up of the potatoes raised from the seed, should be done early, and not too heavily; for if the plants are put out in weather which is not very favorable, they soon begin to shoot up, and the entire soil is penetrated by very small fine fibres, which would be injured by a high or late earthing-up, the production of tubers be delayed for a fortnight or three weeks, and the produce diminished. The potato plants thrive best in a rich sandy soil which has been deeply dug. [Potatoes should never be earthed up at all. Ed.]

By the above method I have raised full sized, merchantable potatoes the first year from the seed; many hills having but three to five potatoes and all of a fair size for market—others having a larger amount were proportionally smaller. By recurring to seedlings we may obtain a healthy art cle free from rot or any other disease, but I have no confidence that they will long remain so after being exposed to the same influence under which the parent stock has degenerated.

The failure of the potato crop in many parts of the country has induced farmers to experiment carefully in order to ascertain if possible in what situations or kinds of soils they generally succeed best, and from what experience I have had, I am inclined to the opinion, that where the land is clayey and tenacious, thereby holding the heavy rains in immediate contact with the tubers until the hot sun coming upon them, while thus thoroughly saturated with water, completes their destruction, drying and baking the ground over and around them, so as to exclude the air; that if they were so near ripe at the time as to retain their form until harvested, they soon give way after being exposed to atmospheric influence. Such soil is unsuitable for raising potatoes—and the same cause that has heretofore prevented the cultivation of the more delicate sweet potato on heavy land, now

operates against the Mercer or Irish potato, which seems to have degenerated in vigor, and has at length yielded to those adverse influences (which the sweet potato never could withstand) that had been imperceptibly, though no less certainly impairing its constitution for many years previous; and that sandy loam, open and porous soils, which allow the excess of moisture to pass off freely from the plants, where by severe storms act like gentle showers merely to moisten the roots and invigorate the plants, and the genial rays of the sun thereafter meliorate the land to the great benefit of the growing crop—is the most certain land on which to depend for a good crop.

Respectfully, WILLIAM. PARRY.

Cinnaminson, Burlington county, N. J., 1st mo. 24, 1851.

[Horticulturist.

Special Manures for Fruit Trees.

Besides the more common and universal ingredients of soils, sand and clay, there are others more essential to the growth of trees. Among the more important of these are potash, lime, and phosphate of lime.

Now, whatever earthy ingredients are found in the wood, bark, and fruit of trees, must be derived from the soil; and if the soil in which they are planted does not contain all these ingredients, the trees cannot flourish. It therefore becomes vitally important to supply such deficiencies by the application of the particular or specific manure needed.

But it is not to be expected that cultivators generally will be able to analyze their variously differing soils, nor to procure it done by a skillful chemist. The next thing, then, that can be accomplished is to ascertain the component parts of the different kinds of trees, which are nearly the same in all localities. If it is found that a particular species contains an unusual quantity of some certain ingredients, we may safely conclude that such ingredients should be largely supplied as a manure.

As instances, analysis has shown that the pear, the apple, and the grape, contain, of 100 parts each of earthy ingredients, the following proportions of potash, lime, and phosphate of lime:—

Pear.

	Sap-wood.	Bark.
Potash,	22	6
Lime,	13	30
Phosphate of lime,	27	6

Apple.

Potash,	16	5
Lime,	19	51
Phosphate of lime,	17	3

Grape.

Potash,	21	2
Lime,	17	39
Phosphate of lime,	15	5

The proportions of these ingredients, although not exceeding the quantities found in some other plants, are so large as to show conclusively the importance of a proper supply in the soil. They already exist in all soils adapted to the growth of fruit trees, but their small amount in particular localities, from natural deficiency, or from long cultivation, may render their application a matter of the greatest importance. Such application made be partially made by common yard manure, which contains them in considerable proportions; but wood ashes, in which they mostly exist in large quantities, will furnish them more freely and with a more speedy effect; as from

the large proportion of animal matter in yard manure, too much succulence of growth or even surfeit would result from its abundant and exclusive application, an evil in no wise resulting from the use of ashes. But over-doses, even of these, should be avoided.

The large proportion of lime in the wood and bark of the apple, indicates its value as a manure for this fruit; we accordingly find that leached ashes, which contain much lime, are eminently useful. Leached as well as unleached ashes may indeed be applied with great advantage to all fruit trees. Bones contain much phosphate of lime, and, pulverized, they would undoubtedly in many cases produce an excellent effect on the pear, and other species.

Iron is found only in minute quantities in the wood and bark of trees; yet the speedy restoration from pale and sickly to deep green and luxuriant foliage, by its application to the roots in some instances, proves that however small its proportion may be, its presence is essential.

An interesting experiment is stated in the Horticulturist, upon a large pear tree, bearing blighted, cracked and worthless fruit, which resulted in its perfect restoration to health, and the production of smooth and fair crops. This change was effected by digging, three feet distant from the tree, a circular trench four feet wide and twenty inches deep; filling this with fresh, rich soil and turf, and intermingling two bushels of scoriae from a blacksmith's forge, two bushels of charcoal, and two pounds of potash. The fresh soil and potash doubtless contributed largely to success. Other experiments of a similar character have been equally successful.

Dr. Kirtland states that orchards on the limestone hills of Ohio, invariably afford the best apples—a remark fully corroborated by other observations. The same eminent cultivator gives the following account of his success with specific manures: his pear trees on worn out land, made but two to six inches growth in a single season, and the fruit was blighted, knotted, and deficient in flavor. They soon began to exhibit evidences of disease and old age. An analysis of the soil was made by Dr. Emmons, indicating its deficiencies. Dressings of phosphate of lime, [in pulverized bones,] ashes, and barnyard manure, with a limited supply of common salt, effected a complete renovation.

The subject of special manures is destined to become one of great interest to cultivators. It is yet in its infancy. Many years of careful experiment, guided by patient and laborious analysis, can only carry it forward to maturity. But in the meantime, enough is known to enable orchardists to operate in many instances with great advantage. Not always knowing the deficient ingredient, they may not at once apply the precise remedy. But there are some manures that can never do injury, that will usually be highly beneficial, and sometimes yield extraordinary results. To enable cultivators to experiment with these, the following excellent practical hints are given from the Horticulturist, from the pen of A. J. Downing, its editor:—

‘For old apple orchards, upon soil deficient in lime, we would recommend a top dressing of lime—for the first time—of 200 bushels to the acre. This will, usually, if the land is in good condition, bring the trees into good bearing condition again. In some soils, the effect will be immediate, and in others it will require one or two seasons for the lime to produce its effect.

‘For middle sized bearing trees, a peck of air-

slaked lime to each tree is sufficient. It is, perhaps, best applied in the autumn, but it will answer very well in the spring. Scatter it evenly over the surface of the ground, as far as the roots extend. It may be ploughed or hoed under slightly, or left upon the surface, as it will find its way downwards in the soil.

"To keep an apple orchard in the *fruit bearing condition*, in a soil not calcareous, and not naturally congenial to the tree, it should be dressed with lime, and with ashes, every alternate autumn, and manured every other spring. The same quantity of spent ashes as of lime, may be used for each tree.

"For the pear tree, we prefer the following compost: Take a wagon load of peat, or black swamp earth—dissolve 50 lbs. of potash in water, and water the peat thoroughly with the liquid. Let it lie a couple of days, and it is fit for use. Or, for the same quantity of peat, use one-third of a load of leached wood ashes, (or ten bushels of fresh ashes,) mixing the whole, and letting it lie a fortnight before using it. Give each middle sized bearing tree, a *bushel* of this compost annually; a newly planted young tree half a peck, and others in this proportion. If this compost is applied in the spring, the trees may also have a top dressing of *bone dust*, if easily obtained, in the autumn, at the rate of half a peck to a tree.

"The same compost, and the same quantities, will answer admirably for the grape vine. But as the grape is a strong feeder, and likes more lime than the pear, we would give it besides, an autumnal coat of lime, at the rate of from 50 to 100 bushels to the acre, applied along with any manure or compost most easily obtained.

"For the plum tree, in light soils, (there is little or no difficulty in growing it in clay soils,) we would recommend a compost, made as follows: To two wagon loads of strong loam, or yellow clay, add a bushel of cheap salt and four bushels of lime. Mix the whole thoroughly; suffering it to lie at least a fortnight. Apply this as a *top layer* or *top dressing* to the soil directly under the plum trees, (spreading it over the surface as far as the branches extend,) at the rate of *two bushels* to a middle sized bearing tree, or half a peck to a young, newly planted tree.

"As a general compost for fruit trees, we repeat, that nothing is equal to that formed of *ashes and peat*. These materials are easily obtained in all parts of the country, and they contain the elements most essential in the organic and inorganic structure of fruit trees. Where peat is not at hand, use wood ashes alone, at the rate of half a bushel of leached ashes to each middle sized bearing fruit tree. But as ashes furnish only the mineral or inorganic elements of food, the usual supply of ordinary manure must not be withheld, unless the soil is already sufficiently rich."—Thomas' Fruit Culturist.

NEW YORK STATE POULTRY SOCIETY.—A convention recently assembled at Saratoga Springs, N. Y., for the purpose of forming a "State Poultry Society." After several persons had addressed the convention, a committee was appointed to draft a constitution, which was reported at a second meeting and adopted. The society was then formed.

CHARCOAL, it is said, placed around rose bushes, and other flowering plants, has the effect to add greatly to the richness of the flowers.

Practical Hints to Cultivation of Pears on Quince.

By W. E. Hooker, Rochester, N. Y.

The pear-loving the pear-cultivating public, have of late years had their attention frequently called to the advantage of growing pear trees worked upon quince stock, both by the writers upon such themes, and by the nurserymen interested in supplying their wants. The advantages and objections to the practice, have been fully discussed by many, and now nearly every one who reads horticultural books, or attends horticultural meetings, know something about them from experience or observation. Still, there are many who plant their trees, and are disappointed in their own case, and perhaps are disposed to blame those who have led them into the experiment.

My present purpose is not to give any new views of cultivation and management, but simply again to call attention to a few important features which have been before ably set forth but which are often overlooked by cultivators, who proceed upon the supposition that the same treatment which enabled them to gather pears from trees upon pear stocks, will answer equally well with those upon quince. I desire to remove this mistaken idea, and at the same time encourage the cultivation of this most desirable fruit, in the most satisfactory and economical method.

If we examine the roots of a quince, we find that they are numerous, but not large or long; they do not extend to any great depth in the soil; nor are they inclined to spread a long distance from the stem or collar of the tree; consequently, the supply of food and moisture must be obtained within a small space of ground, and the ability of the plant to sustain leaves and branches, is of course proportioned to the resources of its roots. If now, we graft a pear tree upon it, whose range of limbs, and of course, of leaves and fruit, is large, and which is provided by nature with corresponding roots, extending deep into the earth, securing firmness to the trunk and moisture to the leaves, without by some artificial means, providing for this disproportion of parts, we must inevitably fail of full success.

In proof of this, we find that those who have planted dwarf pears in grass grounds, without giving them further care, and those who grow them in rich, well cultivated soil but neglect to diminish the tops sufficiently to enable the quince roots to sustain the tree firmly, as well as those who have allowed their healthy and beautiful pyramids to support an enormous load of fruit while yet in infancy, thereby so exhausting its energy that two or three years nursing become necessary, before it is again useful, are not usually very strong advocates for pyramid, or dwarf trees; their own experience, certainly, would not warrant them in recommending their adoption, and if this were the best that could be expected of them, all men would agree, that the less we see of them the better we shall be off.

The obvious methods of avoiding the evils which I have pointed out, are, to secure to the plant a sufficient supply of food, by manuring more highly and frequently than we find necessary for the pear stock, by planting in such soils as do not suffer severely from drouth, by frequent stirring of the soil with spade or hoe, and most especially by abundant mulching; added to this it is indispensable, to reduce the size of the top, by pruning in the winter or spring, and also in some cases during the summer, though I apprehend we shall not in many instances, do so, with that care and patience which M. CAPPE, and other eminent foreigners have seen fit to bestow on their pets.

One thing is certain, the man who is not willing to pay some regard to the peculiarities of the position in which the pear is placed when worked upon quince, need not expect to gather as abundantly and continually, as some men do, who have never given a thought to their noble Bartlett's and Doyennes beyond stripping from their laden boughs, the luscious fruits, with which nature has crowned the year. But to the good cultivator who can afford to spare an hour, now and then, to care for the wants of his silent laborers, there is an abundant and sure reward laid up, in the vigor, beauty and productiveness of this class of trees.—[*Horticulturist*.]

Pennsylvania Horticultural Society.

OCTOBER 17.

The stated meeting of this Society was held in the lecture room of the Museum building, this evening; Dr. W. D. Brinckle, Vice President, in the chair.

The following premiums were awarded:

Designs of cut flowers—for the best to Thomas Meehan, gardener to C. Cope; for the second best to Joseph Cook. *Baskets*—for the best and second best to Thomas Meehan.

Pears—for the best the Doyenne Gris and for the second best the Duchesse d'Angouleme to Mrs. J. B. Smith. The apples, although of fine appearance, were unripe and not in condition to test.

Special Premiums.—For a fine display of grapes, \$2.00, to H. B. Tilden; for a dish of Reine Claude de Bayay plums, \$1.00, to Thomas Meehan, gardener to Caleb Cope.

The following report from the fruit committee was submitted:

PHILADELPHIA, Oct. 17, 1853.

To the President Penna. Hort. Society:—

The Fruit Committee respectfully Report, That since the September meeting of the Society; the following Fruits have been submitted to their examination:

From Alexander Parker, of Moyamensing.—A *Seedling Peach*, nearly three inches in diameter; roundish; dull yellow, with a reddish cheek, and so dark about the base as to appear almost black; flesh yellow, very juicy; flavor delicious; quality "very good."

From A. M. Eastwick.—The *Petre Pear*, from the original tree—specimens very fine, two and three-quarters inches long, by two and one-half broad; stem variable, in one specimen five-eighths of an inch by one-sixth, in another one and one-quarter by one-eighth; flavor luscious; quality "best."

From Isaac B. Baxter.—The *June Peach* (Baxter's Seedling, No. 1); large, ten and one-half inches in circumference; roundish oblate; greenish yellowish white, with a red cheek; free; flavor delicious; quality "very good" to "best."

From Mr. Ladd, 242 Filbert st.—*Larissa*, a Seedling Pear of small size; obovate pyriform; greenish yellow, a good deal russeted, with a mottled red cheek; flesh rather dry; flavor saccharine and pleasant; quality scarcely "good."

From Peter Williamson, 296 South Second st.—Specimens of a *Seedling English Walnut*, of extraordinary size and excellence; two and one-sixteenth inches long, one and five-eighths wide, one and one-

half thick; shell remarkable for its thinness. kernel delicious; quality "best." The tree sprung from an imported nut planted in 1846, and is now fifteen and one-half inches in circumference at the surface of the earth. It bore in 1852 for the first time. The attention of Nurserymen is directed to this variety, which could probably be dwarfed and brought into speedy bearing by being worked on the *Juglans præparatiensis*.

From Mrs. Geo. Liggett, 140 Christian st.—The *Regnier Pear*—size full medium, two and one-half to three inches long by two and one half to 2 and three quarters broad; some specimens weighed eight ounces; obovate; yellow, with a number of minute russet dots, and very often a brilliant carmine cheek; stem cinnamon color, three-quarters to seven-eighths of an inch long, by one-sixth thick, inserted in a rather deep, narrow cavity; calyx open, with short erect segments, set in a wide, shallow basin; seed dark, plump, acute, with an angle on one side of the blunt end; flesh fine texture, buttery, melting; flavor exceedingly luscious; quality "best." Under the name of *White Doyenne* or *Butter Pear*, which it is to all intents and purposes, this variety has repeatedly received a premium at our Annual Exhibitions. And not until recently were we informed by Mrs. Liggett that it originated from seed of the *Butter Pear* planted about twenty-five years ago by her grandmother, Madame Regnier. On examining the tree, which is now two feet seven inches in circumference at the surface of the earth, there is no appearance of its having been worked. Many suckers have sprung up from the root, presenting a similarity in wood and foliage to the tree itself. The growth is more erect and the top more full and rounded than is usual with the *White Doyenne*. We would suggest a trial of this variety in localities where the *White Doyenne* has long since ceased to flourish.

From Henry W. Terry, Hartford, Connecticut.—The *Clark Pear*, a supposed Seedling. Size medium; two and one-half inches by two and seven-eighths, roundish, inclining to turbinate, broad at the crown, rounded at the base; skin smooth, greenish yellow, with numerous small russet dots, and sometimes a warm salmon cheek; stem one inch by one-seventh, inserted in a very superficial depression; calyx small, closed, set in a wide, rather deep, furrowed basin; seed brown, flat, inclining to oval, with a slight angle at the blunt end; flesh fine, texture, buttery, melting; flavor excellent, with a delicate aroma; quality at least "very good;" perhaps we should not err in saying "best." The *Clark Pear* bears a good deal of resemblance in form, texture, flavor and seed, to the Autumn Bergamot of Col. Carr, described in the Transactions of the National Congress of Fruit Growers, for 1849, page 72.

From Peter Raabe.—Four varieties of his *Seedling Grapes*. In 1845, Mr. Raabe obtained a collection of Grape Seed from Germany, which he planted in a bed in his garden. Many of these seed vegetated, and as the young plants were exposed, without the slightest protection, to the inclemency of the weather, none but the hardiest survived. Of these the following four have already fruited, and are unquestionably varieties of great merit:

The *Brinckle*—(Raabe's No. 1)—Bunch large, rather compact, sometimes shouldered; berry five-eighths of an inch in diameter; round; black; flesh solid, not pulpy; flavor rich, vinous, and saccharine; quality "best." Fruited in 1850 for the first time.

The *Emily*—(Raabe's No. 2)—Bunch large, not very compact, occasionally shouldered; berry below

medium, from three-eighths to one-half of an inch in diameter; round; pale red; flesh very juicy, with little or no pulp; flavor saccharine and delicious; quality "best," for an out-door grape. Fruited in 1850 for the first time.

The Raabe.—(Raabe's No. 3).—Bunch small, compact, rarely shouldered; berry below medium; round; dark red, thickly covered with bloom; flesh very juicy, with scarcely any pulp; flavor saccharine, with a good deal of the Catawba aroma; quality "best." Although the Raabe originated in the same bed with the Brinckle and Emily, its unequivocal Catawba flavor and native leaf induce us to believe that it sprang from a chance seed of the Catawba that had accidentally gained admission into the bed. This opinion is strengthened by the fact that the Catawba was in bearing in Mr. Raabe's garden at the time he planted the seed he received from Germany. It fruited in 1850 for the first time.

The Clara.—(Raabe's No. 4).—Bunch medium; not compact; berry medium; round; green, faintly tinged with salmon when exposed to the sun; flesh tender, juicy; flavor rich, sweet, and delicious; quality "best." Fruited the present season for the first time.

From Benj. Gulliss.—*The Gorgas Peach*, two and one-half inches by two and three quarters; roundish, with a slight prominence at the apex; dull greenish white, clouded and blotched with red on the exposed side; cavity wide, rather deep; stone free; flesh whitish, slightly stained at the stone, juicy; flavor saccharine and exceedingly luscious; quality "best;" period of maturity middle to end of September. This fine serrate variety originated with Benjamin Gulliss, N. E. corner of Pine and Schuylkill Eighth streets, from a stone of the Morris White; planted in 1846. It fruited in 1860 for the first time.

From H. B. Lindley, Athens, Ohio.—Enormous specimen of an apple, labelled *Rhode Island Sweet*, but which we regard as *Lyman's Pumpkin Sweet*.—Some of them were more than three inches long, and nearly four wide, and weighed 17 ounces; seed small, short, plump, oval; flavor sweet and pleasant; quality "good."

From Wm. Graham—gardener to the Philadelphia Blockley Alms-House.—*The Graham Grape*; an accidental seedling raised by Mr. Graham. It sprang up in 1845, and fruited in 1850 for the first time.—Bunch of medium size, shouldered, not compact; berry half an inch in diameter, round, purple, thickly covered with a blue bloom; contains little or no pulp, and abounds in a saccharine juice of agreeable flavor; quality "best." The leaf indicates its native parentage. It is probably a natural cross between the Bland and Elsinborough, both of which were in bearing in the garden where it originated.

From Abraham Wismer, near Norristown, Perkiomen township, Montgomery county.—*The Perkiomen Shell-bark*. This the largest variety of Shell-bark we have met with, measuring an inch and three-quarters long, one and five-eighths wide, and one thick, and with the hull on two and a half inches long, two and three-eighths wide, and one and seven-eighths thick; reversed oblong—cordate; shell thin; kernel of "best" quality.

From Wm. Cunby, Wilmington, Delaware—more specimens of the delicious Seedling grape described at the close of the *ad interim* Report for September, and which we have since named *Delaware Burgundy*. We continue to entertain the same favorable opinion of its merits; and regard it a decided acquisition.

From J. Fisk Allen, Salem, Mass.—*St. Ghislain Pear*.—Specimens remarkably fine and of unusual

appearance; two and five-eighths inches long, and two and five-eighths inches broad; roundish, yellow with red cheek; stem three-fourths of an inch long, one-fourth thick, very fleshy; flavor fine; quality "very good."

From Robert Buchanan, Cincinnati, through Hugh Campbell, Esq.—very fine specimens of *six varieties of native Grapes*.

Alexander, Schuylkill Muscadelle, or Cape Grape. Although this variety is of inferior quality for the table, the late Mr. Resor, of Cincinnati, made from it a superior wine, so similar to the Constantia as to be mistaken for it by some of our best wine connoisseurs.

Mammoth Catawba.—Bunch large, shouldered, not compact; berry large, seven-eighths of an inch in diameter; round; of a deeper red, and larger size than the Catawba, but not so high flavored; quality "very good."

White Catawba.—Bunch small; berry large, seven-eighths of an inch in diameter; round; greenish white; inferior to the Catawba in flavor and quality.

Venango.—A Seedling from the Fox Grape. Bunch of medium size; berry three-fourths of an inch in diameter; round; pale red, attractive in appearance; superior in the size of the bunch, and in quality, to its parent; quality "very good."

Ohio, or *Segar-box*.—Bunch rather large; berry small, superior in flavor to the same grape grown here; quality "very good."

Herbmont.—Bunch rather large; berry below medium; five-eighths of an inch in diameter; roundish inclining to oval; specimens scarcely ripe. From this grape Mr. Longworth makes a wine of fine quality, closely resembling in flavor the Spanish Manzanilla.

From the Rev. S. C. Brinckle, Wilmington, Delaware.—*Bonne de Zee* pear; size full medium, two and a half inches long by two and five-eighths broad, roundish; cinnamon russet, interspersed with patches and irregular markings of fair yellow; in which respect, it bears a striking analogy to the exterior coloring of the Uwehlan; stem three-fourths of an inch long, and two-ninths thick, inserted in a narrow, superficial cavity; calyx medium, set in a moderately deep, even basin; flesh fine texture, battery, melting; flavor delicious; quality "very good," if not "best." These specimens differed in form and color from the Bonne de Zee we have more than once received from Boston, which was yellow and obovate.

From I. B. Baxter.—A Pear labelled *Sieulle*, not true to name; very large, four and one quarter inches long, three and one-half broad, and weighing fourteen ounces; long, obovate, inclining to pyriform; greenish yellow; stem one and a quarter inches long by three-sixteenths thick, and half an inch thick near its junction with the fruit, where it is very fleshy, inserted obliquely on a nearly flat surface, considerably inclined; calyx small, set in a deep, rather narrow, furrowed basin; seed pale cinnamon, (the lightness of the color being probably owing to partial decay,) two-fifths of an inch long, one-fifth wide, and one-eighth thick; long, acuminate, with an angle on one side of the blunt end; flesh slightly granular, buttery, melting; flavor rich and delicious; quality "very good." This is probably the *Benne Soule* shown by Mr. Robert Buist at our Annual Exhibition in 1848, and which could not be recognized by our own Pomologists or by those of Boston as any known variety. The tree that produced these specimens, and several more with the same label, were purchased by Mr. Buist from Thomas Lindreth, who had imported them with a large collection of other

kinds from France, through the late Jno. B. Smith. But on examining the invoice, no such name as *Beurre Soule* was to be found in it. The variety, however, being considered valuable, scions of it were widely disseminated; and some were sent to Mr. Baxter. When the remaining trees, under this name, in Mr. Buist's possession, fruited, they proved to be the *Duchesse D'Angouleme*. Even the identity of the first tree with the *Duchesse* may possibly be established by further investigation, although the specimens of the *Beurre Soule* exhibited in 1848 appeared to all of us a separate and distinct variety.

From *Western New York*, through I. B. Baxter.—*The Canandaigua Pear*; two and a half inches long by two and a half broad, roundish—turbinate inclining to pyriform, largest in the middle; skin smooth, thin, greenish yellow; stem broken off, inserted without depression; calyx medium, set in an irregular furrowed basin; flesh fine, texture, buttery, melting, and exceedingly juicy; flavor pleasant, with a delicate aroma; quality "very good." These specimens differed materially in size and form from those that were exhibited at the Second Session of the Congress of Fruit Growers, at Castle Garden, New York, in 1849.

From *Robert Buist*—*Bon Cretien de Vernois*; rather large, two and seven eighths inches long by two and five-eighths broad; obovate; greenish yellow, with small greenish russet patches, and many cinnamon russet dots near the crown; stem three-fourths of an inch long, and one-sixth thick, fleshy at its junction with the branch, inserted in a small depression; calyx closed, set in a regular, rather deep basin; flesh somewhat granular, juice abundant; flesh pleasant, sprightly, with some astringency. Leroy places it among kitchen pears, but we consider it for the table at least "good."

From *Charles Kessler*, of Reading.—*The Ritter*, a native apple of Exeter township, Berks county; two and a half inches long by two and seven-eighths broad; roundish oblong; red in stripes of various hues, with many large white dots; stem short and moderately stout, inserted in a deep, narrow cavity; calyx medium, closed, set in a deep, rather wide basin; seed very short, plump, light cinnamon; flesh tender; flavor fine; quality "very good."

From *William Knabb*, Oley township, Berks co., through *Charles Kessler*.—Fine specimens of the *Yost* and *Yacht or Jagd* apples, described in our ad interim Report for December, 1852; both "very good" in quality, and worthy of being widely disseminated.

From *C. F. Lines*, of New Haven.—*White's Seedling*, a native pear of Connecticut. Size medium, round, obovate; greenish yellow, sometimes russeted; stem rather long and slender, inserted somewhat obliquely into a small fleshy excrescence; calyx open, segments short, set in a rather shallow basin; flesh of fine texture, buttery, juicy; pleasant flavor; quality "very good."

From *Hon. B. V. French*, of Braintree.—*The Beurre Clairgeau*. Size very large; four inches long and three broad; pyriform, larger on one side; nearly covered with russet, patches and dots, even on its brown cheek; stem an inch long, rather stout, fleshy at both terminations, inserted obliquely with little or no depression; calyx open, segments short, basin narrow, very superficial, slightly furrowed. Not sufficiently mature for testing.

From *Mr. Eckert*, of Reading.—A large pear, three and three-eighths inches long by three and three-eighths broad; roundish turbinate, bright yellow, with numerous small russet dots and a marbled ear-

mine cheek; stem seven-eighths of an inch long and one-sixth thick, inserted in a slight depression; calyx medium, segments reflexed, set in a moderately deep basin; seed large, dark brown, pyriform, plump, terminating suddenly in a long neck; flesh somewhat coarse, buttery, melting; flavor fine, with a delightful aroma; quality "best," eaten October 16th. Tree young vigorous, very productive; leaf large, broad, dark green; branches tortuous; shoots stout, dark brown. This we take to be *Beurre Diel*; and, if we are correct in our conjecture, it is, though not the largest, by far the fairest, most beautiful and delicious specimen of that variety we have ever seen; indeed we have rarely met with the *Beurre Diel* more than simply "good" in quality.

From *Joshua Pierce*, of Washington, D. C.—Three varieties of pears, and one of persimmons:

St. Michel Archange, true to name, of fine size, and, at least, "very good" in quality.

Verte Longue Panaache or *Culotte Suisse*, prized only for its curious longitudinal green and yellow stripes.

A *Kitchen Pear*, without a name; very large, three and three-quarter inches long by three and one-quarter broad; said to be fine for culinary purposes, and remarkable for its productiveness.

Persimmons, (*Diospyros virginiana*), of extraordinary size, measuring an inch and a half long, one and three-quarters broad, and five and a quarter inches in circumference, and weighing an ounce and a half; form roundish-oblate. Being pulled prematurely, they were not in eating condition, and had probably not acquired their appropriate color. We should be happy again to receive specimens of this variety, to test its quality, when it has attained its perfect maturity, and has been subjected to the ameliorating influences of frost. Six or seven years ago, the *Bon Jardinier* informed us that two Horticulturists in France had been experimenting with the American Persimmon, with a view to its improvement, and had arrived at encouraging results. One of them succeeded in raising a seedling which bore "large round fruit double the size of the original species, the flavor of which recalls that of a *Mirabelle plum*." The other originated a variety, which, in honor of a friend, he named "*Plaqueminier Pierquin*," producing "fruit as large as a hen's egg, oval acuminate, of a golden yellow color, and an agreeable flavor." Neither of these new kinds, so far as our information extends, has yet been imported into this country.

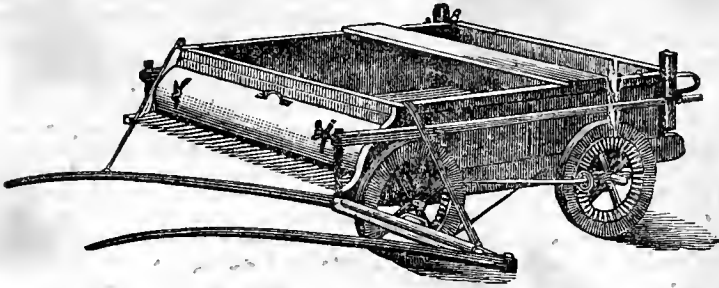
The reports of the committee for awarding premiums at the 25th exhibition were submitted and adopted:

Alderney Cows.

There is a good deal of enquiry lately, for Alderney stock, in dairy districts, where milk and butter are the main objects. As cows and heifers of this breed are scarce, we would recommend, farmers, having good milkers of any of our native breeds, to cross them with an Alderney Bull. In this way it is highly probable, a good milking stock of cows may be got up.

We know where 2 or 3 fine young Bulls, thorough bred Alderney can be purchased, should any of our friends through the State wish to give them a trial.

WAGENER'S CLOVER AND TIMOTHY SEED HULLER.



The patentee of the above implement, Jephtha A. Wagener, has favored us with a cut and description, as follows:

It was patented, May 24, 1853. A machine is on exhibition at the Crystal Palace, at the fair of the American Institute, and the Maryland Institute, Baltimore. We have not seen it in operation, but it is recommended by the certificates of several farmers.

It consists of a simple frame and box mounted on wheels, in front of which is a cylinder, set with spiral knives, acting in concert with curved spring teeth, in combination with a straight knife, which forms a perfect shear, and severs the head from the stalk, which is, at the same time, discharged into the box. The teeth being made to spring and vibrate, not a particle of clover, however stalky or thick, can possibly escape being cut, or allow the teeth to become clogged. The machine is so constructed that it can be made adjustable to the height of the clover and timothy.

With the aid of one horse and a boy, this machine will harvest *twelve* acres per day, thus effecting a saving of fully *one hundred* per cent., by mowing, raking, drawing, stacking, and threshing the heads from the stalks all at the same time, and also retaining the manure to the land, the value of which every farmer will at once appreciate.

The price of the machine is moderate. Persons wishing machines or further information should address J. A. Wagener, 137 Madison street, New York, or at Paltney, Steuben county, New York.

Mineral Phosphate of Lime.

We have heard but little recently of the bed of this valuable substance discovered in the upper part of New Jersey, and which was at first considered both here and in England of much importance. Professor Johnson, sarcastically remarked, it would not be appreciated in America, and would be available to farmers on that side of the Atlantic, more than to our own.

Can any of our readers, inform as whether it has been exported to any extent, and what use has been made of it here.

Agricultural Exhibition in New Castle county Delaware.

This exhibition came off at the time appointed last month, in Wilmington, on the grounds near the city, where permanent fixtures have been erected. We not attend ourselves, but one of our friends, who did, reports his great surprise at the small attendance of farmers, and *apparent* want of interest. Will some of our friends in Delaware inform us why this is so. It is well known, that in that little State renowned for her distinguished men, and where now reside, some of the best farmers and fruit growers, in the country, there is the *raw material* for making one of the finest exhibitions in the Union, in every department. Except in Agricultural Implements, in which a very fine display was made by Messrs. S. & M. Pennoek, who have recently established a large Agricultural Warehouse in Wilmington, and perhaps also in fine Devon's from C. P. Holcomb, who has long been eminent as a breeder of this stock, the exhibition in *other respects* was rather meagre. Our friend suggested, that if the price of membership, in the society, now \$2 00 was reduced to one half or even one fourth, a more *general* interest, would perhaps be excited through the State and a large accession of names. In our Chester County Society reorganized this season, after a lapse of several years, the first exhibition has just been held and attended it was estimated by 10,000 persons.

The price of membership was fixed at 50 cents, and the number of members is about 700. The object in the low price, was to enlist the interest of all the farmers of the county, and it has had the effect anticipated.

Bradford County Exhibition.

This, the *first* fair of the Bradford County Agricultural Society appears, to have succeeded beyond expectation. A gentleman in Towanda, writing to his friend in Tioga, says:

"The first Agricultural Fair of Bradford county closed last evening, after a very successful exhibition of two days. The attendance was very large, the receipts from members and from admissions, amount to \$825, thus putting the Society in a very good position, entirely removing any apprehension as to its

future success. The contributions were very numerous, and very creditable to the farmers of the county."

Among other articles which received premiums, we were struck with the account of a crop of wheat raised by John McCord, of that county. It was of the blue stem variety, and the product of 6 acres was 354 bushels, or 59 bushels to the acre, and the wheat weighed 64 lbs. to the bushel. This is an extraordinary crop and will no doubt be brought before the State Society at its meeting in January for a premium. We doubt if it will be exceeded in the State. Bradford joins Susquehanna county, where G. Walker's great crop of corn was raised last year. Some "spirit" of improvement must have broke loose, and been "rapping" the farmers in those border counties, or else there is a kind of conspiracy there to raise the largest crops in the State, and obtain all the premiums. Tioga is the adjoining county on the west, and we shall not be surprised to hear of the next great report from her.

For the Farm Journal.

French Butter Pumpkins.

MR. EDITOR:—In order to draw the attention of the lovers of pumpkin pie to the above very excellent variety of table pumpkin, lately introduced from France, I send you the product of a vine which grew on my premises during the past season. The vine produced four pumpkins, which weighed as follows: 100 lbs., 60 lbs., 40 lbs. and 38 lbs. The diameters of the largest one was 12 inches one way, 23 inches the other. The shorter diameter being from the stem to the blossom end. They can no doubt be grown to a larger size, as the above grew in a soil not highly manured, and it did not receive any extra cultivation.

CASPER HILLER.

Conestoga Centre, Lancaster co., Oct. 18th, 1853.

New York Agricultor and Farm and Garden.

These papers have recently been discontinued, and are now merged in the American Agriculturist, the first number of which was issued on the 1st of September. It is in the quarto form and to be published weekly, price \$2: edited by A. B. Allen and O. Judd. It is got up in neat style, and from the long experience, both as editors and farmers of the Messrs. Allen, whose names are a kind of household words in most of the farm houses in the country, there is no doubt of an ably conducted periodical, and we wish it the best success. O. Judd is also well known as an able writer on practical and scientific agriculture.

URINE.—Sink an oil cask, in an out of the way corner, and preserve all the urine of the house. In every 100 lbs. there is 72 per cent. of nitrogen, and many other valuable salts besides. Dilute before using, with an equal quantity of water.

For the Farm Journal.

Best Breed of Mutton Sheep.

MESSRS. EDITORS:—As each of us has his favorite object of pursuit, (to which is attached of course superior importance,) it is not to be wondered at that we frequently come in contact with others, holding different opinions from ourselves.

Having been a breeder of a small flock of sheep for the last fifty years, and having commenced with the then common breed of the country and an imported Irish ram, I bred quite a number that were sold to butchers in Philadelphia, at from \$8 to \$12 per head, but found the wool too coarse for the then common *homespun clothing*. I then bred the Leicesters, *Bakewell's favorite breed*, and if Youatt is good authority, they were then England's favorites, and I am not yet sure that they do not continue to be so on their strong rich pastures, notwithstanding the great ado there is about the *fashionable Cotswolds*. At the recently reported sale that took place in Kentucky, a Cotswold ram sold for \$1010 and a Leicester for \$50. Now this only goes according to my opinion to show the misguided zeal of us Americans in giving *size* the preference over *quality*, and I may instance another remarkable feature in the majority of our breeders, and which I conceive is admirably calculated to keep us on the back-ground, and that is their great inclination to mix up the different breeds. I have just noticed in the Southern Planter in an article headed the "Best Breed of Mutton Sheep," a proposition to mix up the Southdowns and New Oxfordshires in this country. The author goes on to give an account of what he no doubt believes to be a *successful attempt*, recently made in England to establish a new breed by a cross of these two breeds. Now I do not feel at all disposed to discredit his statements, for if it can be done the English breeders are the men to accomplish it, and not we Americans. I could cite numerous instances in Youatt's history of the different breeds of sheep, (a work of over 600 pages,) in which complete failures occurred in England in attempts made to establish a breed by crossing two distinct breeds. And now to give my candid opinion I have but little faith in the project, although I am well aware that some of our finest animals are cross bred ones.

Youatt, in speaking of what the Downs were originally, says, page 233, "since that time they have materially improved; yet not by any admixture of foreign blood, for even the cross with the Leicester was a *failure*; and the promised advantages to be derived from the Merinoes were *delusive*."

In page 181, it is stated that "Mr. Ellman, in his examination before the House of Lords says that he abandoned the Merinoes from the difficulty he had in selling them in a lean state, the grazers did not then like to have them; he then tried to feed them himself, but he found that he could fatten three South-

downs where he could fatten one Merino." On the other hand, "Mr. Trimmer, who had a considerable flock of them, says that in disposition to fatten they equal the Southdowns, and the mutton is of the first quality."—Evidence before the House of Lords in 1828. "The public has decided between these gentlemen. The Merinoes did not afford a remunerating price in the carcase and they were abandoned." Now my own experience with Merinoes has been just this much: a few years ago I had quite a lot sent me from New York State, and being unable to dispose of as many of them as I wished, I was obliged to winter a part of them; about 60 I put to Southdown rams, and about as many I did not permit to breed; early the next season I sold the whole lot together to two dairymen. They first drew all the lambs and were much pleased with them, telling me that they all died white and nice except one or two; but when they began to kill the old ones they backed square out, telling me that they looked so yellow and bad they were afraid to expose them in market; and finally they paid me several dollars sooner than comply with their agreement to take them.

The Leicester I found to be a fine breed where one could keep a shepherd to look after them; but with me they would frequently lie down, stretch themselves out and not be able to get hold of the ground again, and in struggling would get more on their backs and die, being helpless, tender and poor sucklers. For the last twenty years I have bred Southdowns, for the reason that I have found them the hardiest of any breed that I have ever bred, and their wool sufficiently fine for any article of clothing that I desire. They are particularly a hill sheep, and I believe the best mutton sheep that has ever been introduced into this country; and I presume the main reason why they are not more highly valued is, that the few little flocks scattered through our country have been so long bred in the same families that they have decreased in size, and of course in quantity of wool.

A writer in the "Annals of Agriculture," states that "he has frequently had black lambs, although he never kept a black ram or ewe." From this he draws the conclusion that their original color was black; that art alone produced the white wool, and that if the best of the Southdowns were left in a wild state, they would in a few years become black again.

JOSEPH COPE.

Highland Home, near West Chester, 22d of 10th month, 1853.

For the Farm Journal.

Horticultural Exhibitions.

Messrs. Editors:—Too much has not yet been said and written to rectify abuses and suggest improvements in our autumnal exhibitions. When opinions differ materially, a comparison of their mer-

its, by calling the attention of the public thereto, cannot be inappropriate.

What is the object of our great fruit exhibitions? How can lookers on be most benefitted? Not certainly by misrepresentations. Is it not virtually acting falsely or misrepresenting to place before our gaze, pears, apricots, nectarines and plums, of tempting appearance, but worthless, because out of season? If we look upon these "golden treasures" for the first time, and fancy how much we would desire such luscious looking varieties as Dearborn's Seedling, Julienne, Steven's Genesee, Washington, Ogden, &c., &c., at this season, and purchase trees, how we shall be disappointed. But a greater loss to the community and mortification to the individual awaits him who, for the first time, tastes these kept-out-of-season varieties.

They had been seen, admired, and their culture commenced, but, for the first time, an opportunity is had to taste. What! These golden Washingtons, Juliennes, Dearborns and Genesees worthless!—Have trees been sold us to produce such trash? They must be eradicated or re-grafted. The hoe, knife or saw, is accordingly applied, and these estimable varieties, *in their season, with proper ripening*, are replaced by others infinitely less valuable. Have not these results happened by false representations?

When varieties have been kept out of season and their flavour gone, should not this fact be made prominent by the exhibitor as well as the Chairman's report? The Committee may have met the particular variety for the first time, and from their opinion thereof promulgate it through their report to the great detriment of cultivators, unless this information is put in their possession.

Let the main object of these exhibitions be constantly kept in view,—the diffusion of correct information among all visitors.

E.

Chester county, Oct. 19th, 1853.

For the Farm Journal.

Farming.

Selected From "The Friend."

"This is one of the most natural and honorable of temporal pursuits, and yet, like all others, is liable to perversion, where a covetous and overreaching spirit is indulged. But where there is found an honest and patient endeavour to secure a livelihood by the sweat of the brow, this is peculiarly blest to the laborer, adding to an adequate support, the blessing of health and peace. "The labor of the righteous tendeth to life" and "better is a little with righteousness, than great revenue without right," "for riches are not forever," "He that is greedy of gain troubleth his own house."

There are in the natural creation, many things, which, to the temperate observer, serve to elevate

the mind and refine the feelings; and, says an admirer of them, good it is to regard in the works of God, the power and wisdom of God, and to gaze with delight on the transcendent beauty that decorates earth and heaven; but he who would drink deeply of that spirit of thankful delight, which the true lover of nature enjoys, must be keenly susceptible to the goodness and love so universally mingled with the visible creation.

Nature is to be felt as well as to be seen by man; that it shall harmonize with his affections, and be accommodated to the moods of his mind. When he walks abroad at war with himself, fevered with wrong, wounded by calumny, or stung with self reproach, the waving trees and murmuring rills are peace makers; the very hues of creation are oil and balm to him; there is mercy in the cool greens of earth and the mild blue of heaven, for they calm his troubled spirit, and soothe him to repose." With such an appreciation of nature's beauties, how delightful must be a country life; but if the mind is suffered to be borne down by a grovelling spirit, or with discontent, its charms must be lost. *A sordid love of gain* will rob the mind of that true enjoyment which nature to her votary yields, and leanness of spirit will be the inevitable and final result. "He that tilleth."

For the Farm Journal.
TOWANDA, Oct. 18, 1853.

EDITORS OF THE FARM JOURNAL.

Dear Sir:—It

affords me great pleasure to enclose with this communication a copy of one of our county papers giving you an account of the *first Agricultural Fair* ever held in Bradford county. The most sanguine friends of the Society were very agreeably surprised at the success which attended it. Considerable attention has been paid, as you are perhaps aware, for several years past to the improvement by some of the older and enterprising farmers of this county, of cattle. Some of the imported stock of John Hare Powell was brought into this county by Judge Laporte, several years ago and his example was rapidly followed by other and enterprising farmers in all parts of the county and at the recent fair it was the unanimous opinion of those present who had visited the State fairs at Harrisburg and Lancaster, that this County equaled Lancaster, and excelled Harrisburg in the exhibition of Cattle. The Short Horn Durhams were the most numerous. The samples of corn crop and wheat exhibited were very good and although none of the crops of corn equalled the great one grown last year in our neighboring county, yet the crops presented were very large and in wheat I think it very doubtful if any county in the State can produce its equal. The field on which the crop referred to in the paper was raised lies about five miles from this place on the old turnpike, leading from Berwick to Wells-

burg, it belongs to a farm bought some years since from the "Franklin College" which at that time owned a very large tract in that neighborhood. The soil like most of the soil in that county looks *rough* but on close examination is found composed of *decomposed grey limestone* which has mingled with the soil and the deeper the plow is put the richer the soil turned up. In walking over the field last week in Company with several others we picked up several flat stones which on breaking we found to be very soft and also to contain the imprint of shells and other fossil remains which appear to be gradually decomposing from year to year and mingling with the soil produces the finest crops of wheat and corn that can be raised. I was not aware until this visit that the soil of our county possessed so valuable an ingredient, but so it is. I had previously noticed in digging cellars, that flat stones thrown out from a depth of 3 and 4 feet would break and exhibit the same appearance of shells and tracks of birds but as the fine forests give place to cultivated farms these stones are turned up and crushed on the surface and so furnish a most valuable manure. The display of garden vegetables was much better than any one had possibly conceived and so (agricultural implements and the products of the dairy—the latter was not quite as *extensive* as might have been but it will be quite large next year. The Court House was appropriated for the display of flowers and fancy work for full particulars of which I refer you to the accompanying paper.

We feel confident in saying to our sister counties in Southern Pennsylvania, that the "northern tier" hitherto considered isolated and frequently styled "northern Barbarians" by our brethren along the Southern part is destined to lead them a hard race in competing for the superiority of their farms and farm crops but it is a race in which the rivals can afford like Nelson and Collingwood "to have no little jealousies."

Yours truly,

ELM.

Improved Mowing Machine.

Martin Hallenbeck, of the city of Albany, N. Y., has taken measures to secure a patent for an improvement in mowing machines, which consists in placing the sickle or cutter at the back of the driving wheel, and attaching the draft pole to the machine out of line with the driving wheel, and at the side of the driving wheel towards the sickle. By this arrangement, the line of draught is made to counteract the resistance which the grass offers to the sickle; the sickle consequently moves forward in a steady manner, keeping in the same line; the machine thereby being made to proceed with a very steady motion. The fingers of this machine for holding the grass, are peculiarly constructed, so as to prevent the grass being forced out from them when acted upon by the sickle; the recesses in the fingers are also prevented from being clogged or filled with dirt. The sickle is also secured above the fingers by a metal plate, in a very superior manner.—*Id.*

New York State Fair.

As the stock and stock breeders of New York, are somewhat famous all over the Union, more attention having been longer devoted to this department there than in any other State, we extract from the Rural New Yorker, the annexed account, of the late State Exhibition at Saratoga, which will be interesting to a large portion of our readers, and keep them posted up with the names of most of the eminent breeders and be convenient in case of a wish to make purchases. It says:

Exhibition of Stock.

Of all Fairs we have attended on this side of the Atlantic, that at Saratoga, in the Stock Department, was the best. Usually an immense number of inferior animals are shown that had better be kept at home, but this year the exhibition was, what a State Fair should be—select.

The right-hand side, as you enter, is devoted to chickens. Large numbers of the Asiatic breeds, as well as the good old Dorking and Game, Spanish, Poland, and other well known breeds were largely shown. S. T. ANDREW, West Cornwall, Ct. and D. P. NEWELL, Rochester, figured largely in this line.

Fine woolled sheep came next. Few were shown. In quality and numbers, the Fairs at Rochesters and Utea were much the best. F. W. DEAN, West Cornwall, Vt., exhibited some good Spanish ewes and a very large Spanish Merino buck. Joseph Haswell, Hoosic, N. Y., also showed some fine ewes of this breed. French Merinos were poorly represented. G. W. McKee, Cambridge, Wash. Co., exhibited three very superior bucks. A two year old, bought of Maj. Sanford, Vt., was a perfect beauty. A first-rate three-year from Jewett, Vt.: another, a yearling was a very good sheep. Felix Weeden, Preston Hollow, Alb. co., showed a good buck and ewe.

The mutton sheep were well represented—not so many from Canada as in former shows, but from our own State. We are sorry to miss the fine animals of our Canadian brethren, but at the same time we are very glad to see that New York farmers are entering with their usual energy and go-a-headativeness into the breeding of superior mutton sheep.

Of Leicesters, J. A. and S. N. Rathbone showed some very fine animals. Hungerford & Brodie, Jefferson Co., were the largest exhibitors. Seven yearling ewes, recently imported, are excellent, as are also the six two year old ewes which took the prize as yearlings last year. Their imported buck did not please us, but the yearling bucks are first-rate—one of them is very superior. One fat ewe a beauty—was sold for \$30 to go to Kentucky. One of the four buck lambs shown bids fair to be a fine fellow.

South-Downs were shown in fine perfection.—L. G. MORRIS, Mt. Fordham, N. Y., exhibited a recently imported buck from Jonas Webb, which for one of his stock, struck us as rather coarse, but it had a corresponding degree of strength and masculinity, and is on the whole an animal of rare merit. Z. B. Wakeman, Herkimer, exhibited a large number superior South Downs.

There were but seven animals of the Cotswold and New Oxfordshire breeds exhibited, at least that we saw. E. Gazely, Clinton, showed four splendid bucks of the Cotswold breed. Wyant and Youngmans, Sand Lake, Rens. co., exhibited three New Oxfordshire sheep which we took for good Cotswolds.

SWINE.—In this department the exhibition has

never been excelled. L. G. Morris showed some splendid Berkshires; quite a number of Fisher Hobbs Black Essex, and some very superior Suffolks. Those who have a prejudice against color will not like the Essex so well as the Suffolks or Middlesex; they are nevertheless a remarkable breed, fattening with great rapidity and maturing early. Suffolks were well and largely represented. This breed evidently stands high in public estimation. Besides the fine animals of L. G. Morris, Nelson Richards, Vergennes, Vt., showed a superior 2 year old boar of the Stickney Breed.—Le Roy Mowry, Union Village, Wash. Co., and Zoar Rider, Cambridge, Wash. Co., exhibited good two year old boars. Other exhibitors deserve mention, but our space forbids. Seth Whalen, West Milton, Sar. Co., exhibited 9 very good shoats of the White Leicester breed. Z. B. Wakeman, Herkimer, showed a boar, a cross of the celebrated Leicester and Berkshire breeds, of enormous size. B. Davis, Vernon, also exhibited a very good 6 month old boar and sow. There were no Chinese, Middlesex, or Yorkshire pigs exhibited.

HORSES.—Owing to the number of Black Hawks brought from Vermont and other States, the show of Horses was the best ever witnessed in this State. The old original Black Hawk, 22 years old, was on the ground, as active and sprightly and at the same time more compact and powerful than many of his colts. This breed, unsurpassed in the world, is exposed to deterioration from the go-a-head tendencies of the age. The mares and colts were a sorry set. Many mares were exhibited that had evidently been selected as breeders because they were good for nothing else. We suppose the object of the exhibitors was to show how good a colt a poor mare might be made to produce.

CATTLE.—The show of Short-horns, though not large was never so good in quality at any previous fair. Morris & Becar, of New York exhibited 28 head. Their recently imported 4 year old Bull "Balco" (not shown for a premium,) is one of the finest animals we ever saw. Many of the Short-horns, exhibited by the same gentlemen are bad in the the crops,—especially is this true of the "Marquis of Carribus," "Balco," "Songstress," "Beauty," and other recently imported animals will do much to correct this deficiency. Geo. Vail showed five head—for sale. E. J. Alden, Boston, showed a very good three year old bull. David Calkins, China, Wyo. Co., exhibited a very good 4 year old bull. Mr. Wm. Bullock, Bethlehem, Alb. Co., showed some fair animals. Wood Converse Co., Woodville, Jeff. Co., showed a first rate 4 year old bull.

Devons were not so well or so numerously represented as at Rochester. There were, however, some splendid animals exhibited. Those of W. G. Faile, West Farms; and of the Messrs. Wainwright, Rhinebeck, particularly pleased us. L. G. Morris had some very good animals. J. B. Tuckerman, Richfield, Ots. Co., showed a very good two year old bull. Geo. Vail, Troy, showed some good animals, but not quite what we should expect from so celebrated and skillful a breeder.

The largest breeder of Herefords in the State, Wm. H. Sotham, Piffard, Liv. Co., did not exhibit in consequence of the points of excellence adopted by the Society. Nevertheless there was a good show, indicating that his breed is looking up. E. Corning, jr., Albany, showed 14 very superior animals,—a three year old bull, a yearling bull, and two cows, particularly pleased us. Remington & Bowen, Sennet, Cay, Co., exhibited some first rate animals bought

of Mr. Sotham.

For the shambles and the dairy the Ayshire breed is unsurpassed, yet it was poorly represented. E. P. Prentice, Albany, and Hungerford & Brodie, Jeff. Co., were about the only exhibitors. The animals of Mr. Prentice are well known—they have few superiors. The other gentlemen showed a two year old bull, an imported and very superior animal, and also a very pretty heifer with the milking points well developed.

In grade animals there was rather a meagre show. There was, however, some very fair animals exhibited. There were a tolerably good herd of fat cattle from Ky., on the ground. Working oxen were well represented, and what is better were *well trained*. Elon Sheldon, Sennet, Cay. Co., showed 14 yoke.

Fruit Culture in Delaware.

One of the most interesting of the recent patent office reports, is that of George P. Fisher, dated Dover, Delaware, embracing many valuable hints, as to the management of Peach Orchards, in that great peach district, and the planting and subsequent treatment of the trees. We are gratified to hear that here is increased attention being given to fruit culture in that region. With the great facilities of transportation both north and south, it has always seemed to us, that next to wheat, *fruit is naturally* their great staple. Hundreds of acres should be planted there with apple and pear trees, for the supply of the Philadelphia market and for export. His reply to the circular says:

The culture of fruit is receiving increased attention here, and the spirit of enterprise is well rewarded. I have no doubt that apples enough can be grown on an acre to render the crop an exceedingly profitable one. I can say nothing with regard to the comparative value of apples and potatoes for feeding hogs and cattle. The varieties of apples that are mostly sought after here for winter use are the Newtown Pippin, and a handsome dark-red apple called "Carthouse." The last named apple I believe is very little known in latitudes higher than 39°. It somewhat resembles the "Pomme d'Api" in flavor, but is very much larger, and in shape more round. The variety which seems to keep best or longest is the Butcher apple, and next to this is the "Grindstone." These varieties will keep till April and May. The most saleable apples we send to the Philadelphia market are the Belleflower and Pippin.—We have no such thing in this section as "blight" on apple trees, nor are we ever troubled with borers, of which so much complaint is made in the more Northern States. Our pear trees are somewhat affected by "blight" which some of our fruit growers think is occasioned by electricity, and undertake to prevent by laying blacksmiths' cinders at the roots of the trees. The yellows on peach trees we believe can be prevented, but do not think a tree can be saved after it is once attacked. This disease first manifests itself by causing the tree to put forth from the trunk or larger limbs bunches of very delicate switches or sprouts, bearing a very narrow, sickly-looking leaf. As soon as this symptom is discovered the tree must be removed, root and branch, and the whole should be taken to some point remote from the orchard and burnt. If you attempt to trim off the diseased part and touch another tree to trim it with the same knife

the latter is certain to be contaminated. So, if you allow the diseased tree to put forth its flowers or blossoms after the symptom above named appears, the disease is certain to be carried by the bees to the surrounding trees. By this treatment, and by cultivating the orchard every year in corn or truck, we seldom hear of the "yellows," and our orchards are kept in good bearing condition for twelve or fifteen years. I know an orchard of fifty acres, immediately in this vicinity, that has been thus managed, and the owner told me to-day that at least 90 per cent. of the trees planted by him in 1838-'39 are still in their prime, and bid fair to last for several years to come. He has also made it a point to give his trees a dressing with soft soap at least once in three years. This keeps the bark in a smooth, clean, and healthy state. If you will dip your hand in the soap and then place it upon the body of a peach tree, you will see the prints of your fingers for at least twelve months. The soap may be applied with the hand, when the tree is small, and with a large paint or white wash brush, when it is grown larger. It is only to be applied to the trunk and care should be taken to prevent its touching the leaves or small boughs, as it will destroy the leaves and injure the buds. The best method of transplanting known with us is the following: 1st. Have your trees fresh from the nursery. If practicable, the holes should be prepared to receive them before they are removed at all. 2d. Take up as much of the root as possible. 3d. Let the holes be dug at least three feet in diameter and two spits deep; then fill in the first or lowest spit with the soil; place your tree in the hole, having all the side roots in their natural position, and fill in with soil; no yellow dirt should be used in the filling. The soil should be moderately packed and rounded up in pyramidal form about the trunk of the tree some two inches above the mark made by the ground in the nursery. 4th. Make a small trench around the periphery of the hole, so that no water shall settle around the trunk, but to secure water at the extremities of the roots. If the trees have been several days taken from the nursery, they should, before being set out, have the roots soaked 24 hours in water, so as to have the pores free for the early circulation of the sap. For the first two seasons the trees should be mulched as soon as the warm, dry weather begins—that is, have half rotted straw placed around the root and lower part of the trunk, about a wheelbarrow load for each tree. If the ground is poor, about a handful or two of guano may, with great advantage, be mingled with the soil—that is, throw it in the bottom of the hole. I have little or no experience in grafting or budding. Our nurserymen furnish us with trees at a very moderate cost, and the trees are always what they are sold for; so that it is less troublesome, and not more expensive, to supply ourselves in this way than to raise our own trees.

PRIZE PAPER UPON THE VINE DISEASE.—The Society of Encouragement, of France, offers a prize of 3,000 francs to the author of the best paper upon the disease of the vine; a prize of 3,000 francs for the discovery of the most efficacious preventive against it, and nine prizes of 500 francs each to the authors of memoirs upon nine different subjects, which it gives connected with the disease.

PAINT YOUR TOOLS.—Every farmer should be provided with a small quantity of the coarser kinds of paint—a few pots and brushes and paint, oil, and should keep his carts, wagons, sleds, plows, harrows, &c., well coated with paint.

How much Pork will a bushel of Corn Make.

This I consider an important question, and one that all farmers ought to be able to answer. I will answer the question by giving the result of an actual experiment, which is the only way of obtaining correct information. Some years ago I was desirous of obtaining information as to the best mode and most profitable way of fattening hogs. I inquired of my neighbors and found some in favor of close floored pens, and others large dry lots; and as to the amount of pork a bushel of corn would make; their opinions were as various as their countenances. I was just beginning to farm, and as I was desirous of knowing the best way of fattening hogs, I determined to try the different plans, and also how much pork a barrel of corn would make. I made a floored pen and covered it in. Weighed three hogs and put them in the pen. I also weighed three of the same size and put them in a dry lot—average weight 175 lbs. I fed six barrels of corn to the six hogs. They were forty days eating the corn—with a plenty of salt and water. Their average gain was 75 lbs. The hogs in the lot gained the most. One that was fattened in the lot gained 88 lbs. One in the pen gained 84 lbs.; the other four were not so thrifty, these hogs were about fourteen months old when slaughtered. I put them up the 25th of October. There was a good deal of sleet and snow during the month of November, which gave the hogs in the pen an advantage they would not have had if the weather was favorable; they eat the same quantity of grain in the same time. It also shows that one bushel of corn will make 15 lbs. of pork; and that the six barrels of corn made \$11.25c. worth of pork, at 2½ cts. per lb.; and that the farmer gets 12½ cts. for his labor of feeding per bushel, over selling at 25 cts. per bushel.

Hogs will fatten faster in September and October, than they will in colder weather. A few years ago I fed one barrel of corn to a very fine Berkshire hog that was about 30 months old, (shortly after being castrated) in the months of August and September, and he gained 97 lbs., in 35 days, which was the length of time he was eating the barrel of corn. He ran on a clover lot, which was of great advantage. This last experiment is considerably over an average, and would not hold good with common hogs. From the above experiment it will be seen that 3¼ lbs. of corn, supposing the corn to weigh 55 lbs. to the bushel will make 1 lb. of pork. Mr. Arnott, as quoted from the *Genesee Farmer*, "thinks 5 lbs. of corn will produce 1 lb. of pork!" This "think" of Mr. Arnott's will not hold good with an experiment. Subsequent observation has satisfied me that the foregoing experiment, as detailed, will do to practice upon.

Another very important question, or inquiry suggests itself from the foregoing; and that is what it is worth to raise hogs to the average weight of 175 lbs. A correct answer to this question, based on actual experiment, would be of great importance to farmers. To value the grass, clover and grain fields that the hog feeds on while growing to a gross weight of 180 lbs. or 200 lbs., is scarcely susceptible of being arrived at by experiment; yet with these assistants I can raise a hog to weigh 175 lbs. and over, with one barrel of corn. It will be seen from these estimates, that two barrels of corn, with the advantage of grass, clover and grain fields, will produce about 200 lbs. of nett pork, or 250 lbs. gross. Estimating the corn at 25c. a bushel, this would give the farmer \$1.50 for his grass, clover, grain fields, capital stock, and his labor. To sell corn at 25 cents a bushels, is very unprofitable business, when we take into consideration

the wear of the land; and pork at \$2.50 per 100 lbs. is a very slow business. If we take into account the absolute necessity of clovering our land and improve it, I have no hesitation in saying that it is better for the farmer to raise pork at \$2.50, than to sell corn at 25 cents per bushel.

Hogs do best in large fields with plenty of water; and the farmer who cuts up his corn in the month of September and October, and hauls it out on his fields, will be amply paid for his labor in the improvement of his land from the stalks, and manure of the hog. It is a great saving of labor to turn the hogs in the field, when the quantity of the hogs and size of the field suit.

W. M. JACKSON.

Fayette, Mo. August 10, 1853.—Valley Farmer.

Improved Car for Transporting Cattle.

One of the greatest benefits conferred by railroads upon our people, who dwell in cities like New York is the transportation of cattle from distant places. Formerly the cattle which were intended for slaughter in this city, and other cities, were marched from Ohio, Canada, and the Western parts of this State, over bad roads, frequently traveling three and four hundred miles before they reached their destination. The time required to perform such journeys was long, being no less than six days and a quarter, at the rate of twenty miles per day. This was attended with great expense, great labor, and exposure of drovers and cattle. One of the greatest drawbacks to the old system of droving, was the great loss of beef in cattle from long journeys, and this was a loss, too, as great to the consumers as the drovers.

The transportation of cattle on railroads saves the loss of beef, as they suffer no fatigue, and are but a short time on the road. Cattle can also be brought from much greater distances to cities; indeed they are brought now from places at such remote distances from New York, that it would have been impossible to bring them thence on foot. They are also brought without trouble, and require but little attendance. With respect to the vehicle—the cars for transporting cattle—it has been found that some improvements were required, and Andrew B. Dickinson, of Herby, N. Y., has taken measures to secure a patent for such a purpose, the nature of which improvement consists in placing in the body of the car a rack extending its whole length, and having the lower ends of its uprights secured by pivots to the sill piece, and the upper ends secured by pins between the joists. By this arrangement of the racks of the animals, to make each occupy a certain portion of the car; this prevents one interfering with or injuring another. These cars are manufactured by Paine & Alcott, Corning, N. Y.—*Sci. Am.*

GREAT CROP OF WHEAT.—Mr. Appleby, a farmer of the town of Iiga, in this county, harvested last summer, a field of wheat containing 12 acres yielding over six hundred bushels, of *fifty bushels to an acre*. Two acres and a half—part of this field—produced at the rate of 52 bushels and some pounds per acre. Mr. A. has cultivated the field in question for the last twenty eight years raising on a crop of wheat each alternate year. For the last four the land has not been manured. His mode of culture is to turn under a crop of clover ploughing ten inches deep, and then keep the surface mellow and clear of weeds by the use of the cultivator. He plows but once for a crop. This soil is a gravelly loam with a slight admixture of clay.—*Rochester Advocate.*

European Grain Markets.

The following remarks from the Mark Lane (London) Express, show that we may rely on a continued heavy demand for our breadstuffs all through the season:

The weather has for some days past been of the most unfavorable character; heavy rain has fallen in all parts of the kingdom, and a complete stop has been put to the harvest operations. Under these circumstances, it is not surprising that the depression which was caused by the large arrival of foreign wheat last week, should have proved but transitory, more especially as the demand for wheat for shipment to France—which was checked by the steps taken by the government of that country, about a fortnight ago, in regard to the prices of bread in Paris—has again revived.

We are not in the habit of taking extreme views, indeed we have been frequently accused of an excess of caution; but in the present instance our readers will acknowledge that we have for months past pointed out the probability of a high range of prices for wheat. This we were induced to do solely on account of the knowledge of the smallness of the breadth under culture, and the generally inauspicious nature of the seasons. What has since occurred could not be foreseen. That a large portion of the crop should be injured by rain, and remain in the fields in the middle of September, has greatly added to our difficulties; and it is now almost impossible to fix a limit to the upward movement in prices. If Great Britain had alone been visited by a bad harvest, the effect on prices would probably not have been important; but unfortunately, the seasons have been much the same over the greater part of Europe.

The countries which in ordinary years would have been enabled to have afforded us supplies, are themselves in want of assistance; and so apprehensive have many of the foreign governments become of dearth, that the laws regulating the importation and exportation have been altered; restrictions on imports have been relaxed or wholly withdrawn, and exports &c., all require supplies. In the countries bordered by the Baltic, stocks of old wheat are either exhausted or reduced into a very narrow compass, and supplies of the new crop cannot be available in quantity before the spring of next year. The rye harvest has turned out badly all over the north of Europe, and the potato disease is very prevalent; the consumption of wheat will therefore be greater than usual, and there will be less to spare for export.

It appears, therefore, that we shall have to depend mainly for our supply of Breadstuffs on the United States and Canada. Previous experience has proved that America cannot, as a general rule, export largely, unless prices in Europe are sufficiently high to cover the expenses of conveying the grain from a great distance in the interior to the seaboard. Fine weather for securing the remainder of the outstanding crops, and an amicable arrangement of the eastern question, might give a somewhat better complexion to affairs; but looking at matters as they now stand there is reason to apprehend that a large portion of the population will, during the ensuing winter, have to suffer from a scarcity and consequent high prices of food.

SALT.—An annual dressing of salt in moderate quantities sown broadcast over the garden early in Spring, destroys the germs of insects; 10 bushels to the acre.

Philadelphia Markets.

October 25.

FLOUR is rather more inquired for, and sales for export, including good straight brands at \$6.50: 500 bbls reported at a shade less, and 700 bbls Eagle Mills at \$7 per bbl, the market closing with a little more steadiness on the part of holders; the home trade are buying to a limited extent, within the range of \$6 62½ @ 7 25 per bbl, according to brand. Rye Flour and Corn Meal remain quiet but firm, with small sale of the latter to notice at \$4 per bbl for Penna. Meal.

GRAIN—The receipts and sales of Wheat are moderate, and the market is nearly stationary; about 5000 bushels, mostly prime Southern reds, sold at 135c, and 7000 bushels white at 141c for good Southern and 142½-145c for prime Pennsylvania, the latter afloat. Rye is scarce and wanted at 88 cts.

CORN—the want of vessels limits the demand good Southern and Pennsylvania yellow is offered at 78-80 cents, but the market closes with a little more firmness on the part of holders. Oats are about stationary, with further sales of 2000 to 3000 bushels Southern at 45-46 cts.

PHILADELPHIA CATTLE MARKET Thursday afternoon, Oct. 20th.—The offerings of Beef Cattle this week have slightly fallen off, amounting to 1800 head, of which about 500 were driven to New York. There has been a good demand, the sales being within the range of \$7 a 8.75 per cwt. About 250 Cows and Calves were offered, all of which were disposed of at \$12 a 36 each, as in quality. Hogs—600 head offered nearly all of which were sold to City Butchers at \$6.87½ a 7.37½ per 100 lbs., principally at the latter quotation. Sheep and Lambs—The supply has somewhat increased. There were 1300 head offered, which were sold at \$2 to 6.25 each, according to quality.

Wilmington Markets.

Wheat Flour from store,	6 75
Rye, do. do.	3 75
Wheat per bushel, (White),	1 35
Corn Meal per barrel,	3 75
do. do. per Bushel,	80
Corn from wagon,	78
Oats,	40
Flaxseed,	1 25
Plaster, (from yard)	4 00
Salt, ground and alum,	50 a 60

RULE FOR FINDING THE WEIGHT OF LIVE STOCK BY MEASUREMENT.—The girth is the circumference of the animal just behind the shoulder blades. The length is the distance from the shoulder blade to the rear of the buttock. The superficial feet are obtained by multiplying the girth and the length. The following table contains the rule to ascertain the weight of the animal:—

If less than 1 ft. in girth, multiply superficial ft. by 8	
" 3 and more than 1, " " 11	
" 5 " " 3, " " 16	
" 7 " " 5, " " 28	
" 7 " " 7, " " 32	
" 11 " " 9, " " 43	

Example.—Suppose the girth of a bullock to be 6 ft. 2 in., length 6 ft. 6 in. The superficial area will then be 34 square ft. This multiplied by 23, in accordance with the preceding table, gives the weight, 782 pounds,

Fowl Meadow Grass.

We have received from our old friend A. Jones, Esq., of Frankfort, the following communications respecting fowl meadow grass. As we stated in a former number, there is a variety or species of the *agrostis* genus of grasses, that is native in the low moist lands, throughout the whole length and breadth of Maine, and is known by the name of fowl meadow grass.

There is also another variety of fowl meadow, cultivated from seed brought from Massachusetts, and the middle States, which is like it, but not quite so coarse. They are both excellent grasses, and well worth cultivating.—Ed

MR. EDITOR:—This grass deserves increased attention. As one motive for its propagation, the public may be assured it is a native grass of Maine. It was found on the Madawaska meadows, when the French first settled there. On clearing off wooded land on those meadows, or on the lands adjacent, fowl meadow grass comes in without sowing seed.—This comes of the seed dropped in the manure, from Moose and Deer that feed on those meadows, and of cattle since the settlement. This grass prevails on all the meadows on the river St. Johns, subject to overflow; also on the Mirimachi. It can be made to grow on any kind of land not too wet, best on moist land, flourishing especially well on land adjacent to streams overflowed in times of freshets.

It is not a water grass, hence will not bear being overflowed by a dam all winter. An opinion prevails that to preserve this grass in perfection, it must be permitted to stand, until some of the seed will scatter in the process of curing. It would seem that this need not be every year, for like many other plants, it propagates by offshoots from the roots at the top of the ground. No grass suffers less by standing past the best time to cut. Does not rust, nor does berds grass rust mixed with it. If the burthen be ever so heavy, this grass is never coarse. Near the ground it is wiry and full of joints, containing but little moisture, hence is easily made dry, is so long and limber as to be easily secured from the effect of rain.

ARCHIBALD JONES.

Frankfort, August 12th 1853.

MR. A. JONES,—Sis;—Yours of July 28th is received, making inquiry of the grass or native grass of this part of the county. I have made some inquiry, and also am acquainted with the grass of which you wish in, formation on. This grass is a native of this county, and so far as I am informed it is fowl meadow; please find enclosed a specimen of the grass. You can be assured that this grass is native of this part of the country, and also you will find it in all the meadows on River St. John. I have cut some of the same kind of grass on my lot this season.

Respectfully yours, S. STEVEN

Fort Kent, Aug. 2d, 1853.—Maine Farmer.

REMEDY FOR SMOKY CHIMNEYS.—The Scientific American states on reliable authority, that, "if two feet above the throat of your chimney you enlarge the opening to double the size, for the space of two feet, then carry up the rest as at first, your chimney will never smoke."

Leisure for study, thought, and social enjoyment are to be counted as part of one's income.

Sow Destroying her Pigs.

The best way with a sow that destroys her pigs is to take them from her till you have them all; then have two or more persons take hold gently but firmly, lay her flat, tie her legs and hold her fast; put a string round her nose, if you please, to stop her noise, then bring the pigs; put them to her, let them suck. She will very likely soon begin a pleasant noise and take them kindly; if the first time does not answer try it the second. I have tried this method several times and never knew it fail of complete success.

East Salisbury, July 17th.

M. F.
Maine Farmer.

A LONG LIFE OF USEFULNESS.—The first premium on woolen yarns, at the Plymouth County Agricultural Fair on the 6th, was awarded Miss Betsy Holmes, of Marshfield; a lady 95 years of age.

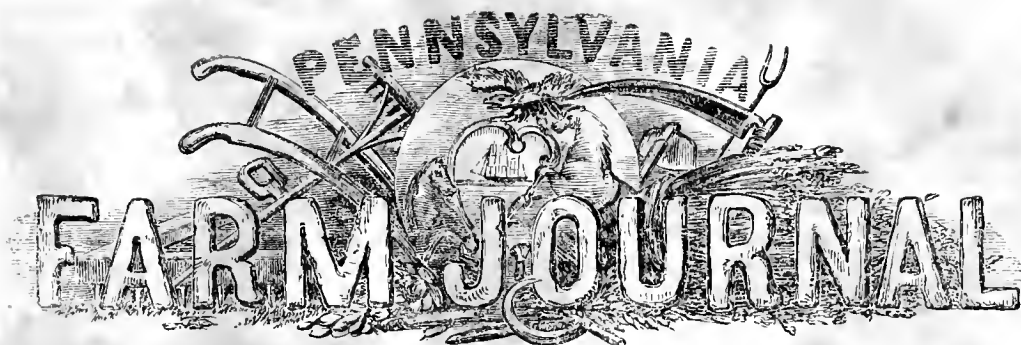
PROTECTION OF TREES.—The Legislature of Michigan has passed an act in substance as follows: That every person who wilfully, wantonly, and without cause, shall cut down or injure any fruit or ornamental trees, not his own, and the damage shall amount to \$25, the said person shall be imprisoned in the State Penitentiary not exceeding five years, or in the county jail not exceeding one year, or by fine not exceeding \$500, at the discretion of the Court. This act takes effect immediately. So we learn from the Michigan Farmer.

THE MAMMOTH TREES IN CALIFORNIA.—The principal mammoth trees of Calaveras county, Cal., are named as follows, and are of the annexed dimensions: The big tree (cut down,) 249 feet in length; "Father Pine," length 400 feet, circumference 119 feet; this tree 250 from the ground is no less than 12 feet in diameter; "Three Sisters," a cluster, together are 92 feet in circumference, and 300 feet in height; the centre one is bare of branches 200 feet above the ground; "Mother Tree," 91½ feet in circumference, 325 feet high; "Mother and Son," united at the base, 92 feet in circumference, 300 feet high; "Pioneer's Cabin," 85 feet in circumference, 200 feet high, "Siamese Twins," 90 feet in circumference, 325 feet high; "Guardian of the Times," 85 feet in circumference, 325 feet high; "Uncle Tom's Cabin," 94 feet in circumference, 300 feet high; "Beauty of the Forest," 72 feet in circumference, 300 feet high; "Two Friends," 85 feet in circumference, 300 feet high.—The above named trees are all embraced in an area not exceeding one-half mile in extent.

PUBLISHER'S NOTICE TO SUBSCRIBERS.

While we have the pleasure of returning thanks to a large number of our subscribers, for their prompt remittances for the present volume, we regret to have to state that there are many who are in arrears for the same, and a few who have not paid up for the previous volumes. The amount thus due from each individual is so small, and their residences are so scattered over the State, that it will not pay to employ a collector.

Though we prize our friends much, we should praise them but little, and to their faces not at all.



PENNSYLVANIA FARM JOURNAL

VOL. 3. WEST CHESTER, PA., DECEMBER, 1853. NO. 11.

County Fairs in Pennsylvania for 1853.

The progress of agricultural improvement in Pennsylvania as evinced in the number, and success of the different county Fairs the present season, is truly encouraging. It shows there is a spirit abroad, and a determination that the Key Stone, shall fully keep up with the times, and that she shall not be outstripped in any department of her Agriculture by States either north or south of her. Her present high position we think, is to a great extent owing to the establishment of the State Agricultural Society, and the stimulus thus given to the formation of societies in the different counties. Great credit is due to Judge Watts, Messrs. Gowen, Roberts, Jessup, Heister, Irwin, Mumma, Elwyn, Shubert, and many others we could name, who took the initiative in its formation, felt its necessity, and that without it, our State, a bounding in Agricultural resources, would become isolated, and almost a by word of reproach. The effort under considerable discouragements and predictions of failure, succeeded, our State Society has held three successful exhibitions the last one exceeding in its gross receipts any State Exhibition yet held in the Union. Something is now wanted to produce a concert of action, between it and the different county organizations. These latter, are now entirely independent of it and each other, acting within their own sphere, and unconnected in any way with that of the State. There is a very large amount of strength, thus lost, and much available information, which like little rills running into a larger stream might be diffused more extensively, and be more directly and positively useful. It would we think be desirable, that reports should be annually made out, from the statistics within reach of the county Societies as to the state of Agriculture and Horticulture in their respective districts, and which should be embodied for publication, by the State Society. In this way, a bond of union would be cemented among our farmers, and the wants as well as the riches of each section, fully brought out. More county exhibitions have been

held this season, in Pennsylvania than ever before. In addition to those previously noticed, we publish such information about the following, as we have been able to collect. We should be obliged if the secretaries of any of which have been omitted, would forward reports.

BEDFORD COUNTY.—The Enquirer, published at Bedford says:

Bedford county proves by this exhibition that she can raise as good stock, and all kinds of produce as any other county in the State. The horses, cattle, hogs and sheep, exhibited would do honor to any community. As good wheat, rye, corn and oats, were shown as can be produced anywhere. Our farmers appear to take a lively interest in the work, and we have no doubt that next year will be as great an improvement on the present as this has been on the last. Our mechanics, also did themselves great credit, by the display of their ingenious and useful mechanism. Great praise is also due to the ladies for the exhibition of their many useful and tasteful articles. In fact all engaged in the affair are entitled to the highest praise.

The 4 samples of wheat which received the premium, we observed weighed respectively 69, 69½ and 68½ lbs. The yield to the acre is not stated, but the above weights are rather uncommon.

MONTGOMERY COUNTY.—The exhibition of this society came off on the 20 and 21st of October and embraced the usual display and variety of stock of all kinds also fruit, vegetables, grain, implements, domestic manufactures; miscellaneous articles, and also a ploughing match. The Shanghais and Chittagongs have found their way up into that region as well as other parts of the State. The attendance of farmers and mechanics, as well as ladies appears to have been large on both days. An address was delivered by Judge Cooper, containing many excellent hints for the farmers, to increase the quantity and quality of their products. It is highly commended. After paying all expenses and premiums, a fund was left on hand for another year. Montgomery county has done exceedingly well, for this her first exhibition.

McKEAN COUNTY.—This is one of our border

counties, on the New York line, east of Potter, about which we had some interesting statistics in our April number of present volume. Her second exhibition was held on the 5th and 6th of October. The weather was unfavorable, but notwithstanding the rain and mud, some fine stock was brought to the ground from a considerable distance, among which about 13 head of fine Devons, from Col. Little of Bradford township, were conspicuous. There were also fine specimens of native breeds, as well as some Durhams and South-down sheep;—also fruit, vegetables and fancy work. The whole wound up with an excellent address, from Hon. B. D. Hamlin, from which we intend to copy some extracts. We do not know his occupation, but if he will practice, what he preaches, we will guarantee that he makes a good farmer. McKean county is said to be remarkably adapted for grazing, and the Agricultural Society will give quite an impulse to the improvement of stock, which would do credit to her fine pastures.

MIFFLIN COUNTY.—This was either her third or fourth exhibition and the premium list appears to have embraced a wide range, of stock and other articles for competition, such as agricultural implements, premiums for the best managed farms, grain, vegetables, domestic and household manufactures, Bread, Butter, Preserves, Honey, Fruit, &c. The list of premiums indicates that considerable attention has been paid to the improvement of the breeds of cattle, sheep, swine, and poultry. The society is in such a prosperous condition, that the managers propose to purchase a lot, and erect permanent fixtures for its accommodation.

WESTMORELAND COUNTY.—The Fair for this county was held at Mount Pleasant on the 18th of October, and is described as a very fine affair. Westmoreland, is one of our richest agricultural Western counties, famous for her superior wheat and also cultivates largely rye, oats, Indian corn and buckwheat. Considerable attention is also paid to raising cattle, sheep and swine. We had expected a good report from her, and this the third annual exhibition shows she is fully up with the times. The amount of stock exhibited was very large, and that of horses especially fine. The premiums awarded was quite liberal and the attendance unusually great. We should be pleased to publish a list of the officers of this society.

SCHUYLKILL COUNTY.—The second annual exhibition was held in North Manheim township and occupied three days. "It is spoken of as not large but embracing a variety of horses, cattle, sheep, hogs, Poultry, Grain, flour, potatoes, and vegetables, generally, agricultural implements, carriages, harness, dairy and household manufactures, productions of the loom, &c., presenting most gratifying evidence of the skill and industry of the farmers and mechanics, as well as the productive character of the agricultur-

al portion of the county." The ladies department appears to have been well represented, and contained some fine specimens of needle work, also, woolen stockings, mittens, &c. A leading feature of the exhibition, as in most other places this season, was the Poultry, which was very fine, and from a large number of contributors. Our friend, and occasional correspondent of the Journal, J. S. Keller is Secretary and Librarian of this society. We should like to hear from him more frequently. He and J. J. Paxson, seem to have been successful competitors, in horses, cattle, sheep, swine and field crops.—Their influence and example will have a happy effect, through the whole county in stimulating future competition.

NORTHUMBERLAND COUNTY.—The recent exhibition of this society appears, to have been one of the very best, yet held in the State. With the exception of neat cattle, which were not on the ground in such numbers or of such improved breeds, as in some other counties, the different departments appear to have been well filled, and embraced some fine blooded horses, superior swine, of great size and fatness, and a magnificent display of Poultry. This latter was to have been expected, as our friend David Taggart who resides at Northumberland, was one of the first in the State to give attention to improving our breeds of poultry, and whose good example, has no doubt contributed to extend the poultry fever through that section. He is well posted up, with the origin, peculiarities, and respective value of the different breeds, now most esteemed, and has probably one of the best collections in the State.

There appears to have been also, a fine display of articles of domestic manufacture in that county, such as furniture, needle and fancy work, drawings and paintings from the Milton Female Seminary, daguerreotypes, broad cloths, flannels, coverlets, woolen yarn, wine, preserves, cranberries, &c.

The whole was concluded with a capital address from David Taggart, which was received with great satisfaction, and which we hope to be furnished with, to make same extracts for the Farm Journal.

MERCER COUNTY.—We understand an exhibition was held in this county, at which an address was delivered by that sterling friend of agricultural improvement in Pa., James Gowen, Esq., but we have not been able to obtain any information about it, directly or indirectly. Will some one please acquaint us with what was done there. We do not recollect that we ever had a list of the officers, of the Mercer County Society. Mercer is one of our Western counties, bordering on Ohio, well watered by fine streams, and very productive in wheat, as well as corn, oats, potatoes and live stock. Large numbers of the latter are raised for the eastern market. It is also well located, in respect to our internal improvements.

LAIR COUNTY.—This exhibition took place on the 20th, and 21st and 22d, October; occupying two days,

and we believe is the first since the organization of her Agricultural Society. The managers in their report say:

To superintend such an affair was entirely new to us, and consequently made us liable to commit some errors—for which we have only to say, by way of apology, that we endeavored to do our duty.

On Friday a heavy shower of rain caused not only a falling off in the number of visitors but also in the receipts of the society—but notwithstanding all the untoward circumstances, we realized a sufficient sum to pay all the printed premiums with an addition of \$183, as discretionary premiums, which has been divided between the different classes of exhibitors according to the recommendations of the various committees; and we think there will be an amount left sufficient to pay all expenses and leave in the treasury \$100—a little more than was in it at the time we were authorized to make our arrangements for the exhibition.

We observe, in the list of premiums, this society have adopted the feature, quite common in the interior of the State, and a very commendable one too, of making their exhibitions, not simply agricultural and horticultural, but to include almost every department of domestic manufacture, and home industry, mechanics and works of art found in their county. In this way the interest becomes wide spread, almost universal, there being no one either young or old residing within an intelligent and working community, who will not become interested as a contributor or spectator. In addition to a quite extensive scope of premiums, relating to Agriculture and Horticulture, the Blair County Society also awarded premiums for harness, teams, dentistry, daguerreotypes, mechanic arts, boots and shoes, furniture, marble ornaments, tailoring, blankets, carpeting, brick, minerals, lumber, printing, needle work, and general fancy work.

Among the display of agricultural implements, we observe several new machines, such as mowers, reapers, fodder cutters, crushers, field rollers and crushers, grain planters, (Hauks patent) grass sowers, patent churn, and implements for cutting off corn, and the Michigan plough; some of these are new to us, and we should like to hear more about them. A ploughing match was also held, at which some good work was performed. The premium for the best acre of corn was awarded to Joseph Shannon, 179½ bushels of ears to the acre.

The exhibition in this county, appears to have been highly spirited and successful.

It is very rare to find ground which produces nothing; if it is not covered with flowers, with fruit trees and grains, it produces briars and pines. It is the same with man; if he is not virtuous, he becomes vicious.—*La Bruyere.*

TEMPERANCE.—A manufactory of imitation champagne wine, made from the rhubarb plant, has just been established near Epernay, in France. It is stated that it will manufacture four to five thousand bottles a week, at 45 cents a bottle. The drinkers of Champagne need not, therefore, be alarmed at the prevalence of the grape disease in Europe.

Prize Essay on Pigs.

[CONTINUED FROM PAGE 269.]

I omitted to state that prior to preparing the carcass for bacon, the whole of the omentum or lard ought to be taken out; this is, however, so obvious, that the omission is not very material. It is by no means an uncommon practice with bacon curers to render down the caul with the lard: if the caul is taken out carefully and well washed, this may be done without detriment to the lard. Lard is rendered down by being first cut up into pieces, and placed in a boiler along with a little water, which as it melts is strained off and poured into bladders. Great attention is requisite in rendering lard in order to maintain the proper degree of heat, yet at the same time to prevent burning; bladdering lard also requires some dexterity. When all the lard is strained off, the remainder is subjected to pressure in a press appropriated to the purpose, by which means very little fat is left, what is left in the press is called greaves, and is sold in cakes to feed dogs, in some instances to feed hogs, also to the Prussian blue makers. Although the term offal has been several times used, the meat in several instances, though so called, is in fact the finest part of the pig; for instance, the griskin in Ireland is sold together with the piece cut out of the breast and the haunch-bone and meat appended thereto, are all called offal, and sold at the rate of from 18s. to 22s. per cwt.; notwithstanding which term the griskin is undoubtedly the finest part of the pig. No animal yields so little mere offal as the pig, every part being made useful—feet, head, and shanks, are all admired when pickled or made into brawn. The poor man makes a comfortable meal of the pluck and part of the caul; the large intestines and stomach are sold under the name of chitterlings; the small intestines envelope sausage-meat; sausage-meat itself is formed from the scraps; black puddings are made from its blood, the bristles are appropriated by the brush-maker, every part is turned to account, so much so, that we cannot be surprised at the hog being so long continued a favourite at the farm-house, particularly when we take into consideration the valuable property which his flesh possesses of being easily preserved for future occasions by means of salt. In noticing the curing of bacon and pork, it is barely requisite to notice the curing of pork for the navy, the cutting up of which requires some practice, as every piece ought to weigh as nearly as possible alike, with an equal amount of bone. When cut up, it is thrown into large tubs containing a preparation of strong pickle, formed of salt and saltpetre; when cured it is put in barrels, the bottom of the cask being covered with a layer of bay salt, then a layer of pork, another layer of salt, and so on alternately until the cask is nearly filled; then a layer of salt is laid on the top, and the cask headed up. The fresh pickle out of which pork has been taken is then saturated with salt and poured through a hole left in the head of the cask for the purpose; when the cask is full, the hole is plugged up and the cask sent to market. Porkers cured for the home-market, and usually known in the metropolis as barrelled "*Berwick Pork*," is cured by being cut up into pieces and salted in tubs, having no other brine than that formed by itself in pickling. It is, when cured, taken out, packed in barrels along with fresh strong pickle and sent to market. A large quantity of the "*Berwick Pork*" sold in London comes from the west of Ireland. For home use pickled pork may be made, using a little sugar in addition to the salt, by which

means less of the latter need be used. By this mode the pork is not quite so salt; as, however, pickled pork is always preferred when made from pigs of moderate size, it is better to make the same as wanted, and not to keep it more than a month or six weeks, for prepare it in whatever way that can be devised, the flesh of young pigs will contract very much in the pot if long cured, and in cooking care should be taken not to overboil it, otherwise it will contract. All sorts of receipts have been given for curing ham and bacon, some representing the mode of one country, some of another, overlooking the fact that almost every country or county adopts varied means, and do not confine themselves to any particular rule. If half a dozen farm-houses in Westmoreland and Cumberland, who practice curing bacon on an extensive scale, be asked for their recipes, three or four different ones will be given; in fact the mode of curing is most empirical, every curer adopting a formula of his own. If any book treating on swine and curing bacon is taken up, it will be invariably found that sugar or molasses enter into the reputed recipes of most of the celebrated districts. Now the writer knows from actual experience, and from having been witness to the curing of bacon and hams in the West of England, Cumberland, Westmoreland, and Ireland, in the latter country where both York hams and West of England bacon is made up for the English market, and sold as such in England (one curer of York hams in Ireland sending almost the whole of his make to Hull and York!!!) that no sugar or molasses enters into the process of curing where the business is carried on to any extent. In Cumberland and Westmoreland it is customary, when the hams are sufficiently cured, to mix up a species of pomatum formed of lard or fat, black pepper, and sugar, and rub this over the bottom of the ham, but more particularly around and over the end of the bone, filling the crevices well up with this substance: the principal effect of which is that it excludes the air, and consequently diminishes the chance of decay from ordinary causes, and the pepper decidedly prevents the fly converting it into a nest. With careful persons the ribs, bony parts, and joints in bacon are treated in a similar manner; the sugar and pepper have also the effect of giving the ham and lean parts of the bacon so treated an additional fine flavour. The only places where I have known sugar much used in curing bacon is in some parts of Essex, where I have tasted it quite sweet with sugar. The fine flavour of the Westmoreland and Cumberland hams is principally due to the fact of their being fed on oatmeal and buttermilk, and not to the mode of curing. Another important fact is that whilst firm, well fed hogs absorb less salt than ill fed animals: in fact, though as much salt is used with the former as with the latter, the former when perfectly cured will be by no means so salt as the latter, although like means are used in each case, and continued in pickle or salt a like length of time, and the reason is obvious from natural causes. There is not much fear of well fed, firm hogs becoming over salt in curing, unless great excess of salt and saltpetre are used for the purpose, or kept preposterously long in salt. In whatever form the flesh of hogs is intended to be disposed of, it is requisite that food should be withheld from them for at least sixteen or twenty-four hours prior to their being slaughtered; and if they have previously been driven, they ought to have a rest of three or four days before being killed, for if killed when in a nervously excited state, or incipient

fever, arising from over driving or hot weather, the meat will only with difficulty "take the salt." The state of the weather is a matter of great importance in curing bacon, warm and very moist weather being extremely prejudicial. Hot weather is not so injurious as is generally imagined, provided the atmosphere is dry. As however the atmosphere is generally charged with moisture in proportion to its high temperature, the hurtful effect which frequently follows curing during the summer season is attributed to heat instead of the true cause, viz: excess of moisture in the atmosphere, the baneful effect of which is heightened by its higher temperature, to which may be added the feverish condition of the animal at such seasons; if within the curer's power, his operations ought to be regulated rather by the hygrometer than by the thermometer. This is, however, difficult to be accomplished, as hogs should fast sixteen hours before being slaughtered, after which they require to be hung up to cool sixteen or twenty more; at least thirty-six hours must elapse before the sides are fit for the curer: in our variable climate many changes may occur within that period. Severe frosty weather is not otherwise unfavourable to curing bacon than that which arises from the circumstance that it will not "take the salt" at all, but remains quite fresh, until a thaw comes on, when it takes the salt rapidly.

The term antiseptic is applied to those substances which prevent or retard the progress or tendency to decay, which is the natural condition of vegetable and animal matters when deprived of life. Antiseptics consist of creosote, the essential oils, salts, &c. The theory of their action has never been properly explained; some substances for this purpose are much more powerful than others, such as creosote and the essential oils; others, as tannin and corrosive sublimate, owe their antiseptic properties to the fact of their forming insoluble compounds with animal tissue, &c. This does not explain the rationale of the action of saltpetre and salt in preserving provisions. Although we are unacquainted with the actual cause of the preservative powers of salt and saltpetre, yet there are some circumstances connected with their action that explain in part their antiseptic powers. It is well known that the presence of moisture and the atmosphere are requisite to induce decay; that heat hastens and cold retards its progress. Now all the animal tissues, whether muscular or cellular, contain a certain amount of water, whilst the fluids which are not withdrawn from the animal in bleeding contain a large amount of water; these fluids contain several substances of a most complex nature, high atomic weight, and facile decomposition, to which the excess of moisture greatly assists. In proportion to its entire weight none of our domestic animals contain so small a proportionate amount of muscle and tissue as the hog, the major part consisting of fat, which, from its more simple chemical composition, is less liable to decay, or becoming, as it is commonly termed, "rusty" or "rusty," which rustiness will generally be found on examination to have commenced in the decay of the enveloping or cellular tissue. Common salt absorbs moisture where an excess is present, and yields the moisture so absorbed on exposure to a moderately dry atmosphere. These properties, in connexion with the fact that salt is an agreeable condiment, render this substance, irrespective of its cheapness and general distribution, the most fitting antiseptic that can be applied. I am inclined to consider the ultimate action of salt in a great measure as me-

chanical, whilst that of saltpetre (*nitrate of potash*) is entirely chemical. When a quantity of dry salt is applied to pork recently killed, and thus left in a dry apartment, the salt will soon assume a moist appearance in consequence of the union of the moisture in the meat with the salt, eventually forming a liquid called brine. If this brine and moist salt is now thrown away, and fresh dry salt applied, the whole of the moisture in the meat may be extracted with the exception of that moisture which is retained by the greater chemical affinity of the animal fibre. Meat so treated would, no doubt, keep well, but it would be excessively salt. In the course of salting meat, the animal tissues become saturated with a solution more or less strong, according to circumstances, of salt. In drying, the water in the brine is evaporated, the meat becomes to a certain extent desiccated, many of the pores are filled with and the exterior parts become covered with an efflorescence of salt; the moisture having been in a great measure extracted, combined with the presence of a considerable quantity of salt not only in the tissue but as an exterior coating, preserves the meat from the action of the atmosphere, provided it is kept in a dry place. Salt alone will not give that agreeable red colour so much admired in preserved meats; this is accomplished by using a small quantity of saltpetre. The change of colour caused by using saltpetre is a pretty fair proof that a chemical combination takes place; a further proof is that the muscular fibres are rendered decidedly firmer when used, and when in excess, causes the muscular part of the meat to become harshly hard, or, as it is commonly termed, stringy and tough.

The difference between hogs that have been well and ill fed consists mainly in the circumstance that the well fed hogs have their cellular tissue firmly knit together, enveloping firm and well filled cells of fat; indifferently fed hogs have the muscular or lean parts loose and flabby, the cellular tissue and enveloped fat is also loose, and sinks easily on pressure by the finger. The tissues, instead of being firm and elastic and of a white colour, will be found soft, non-elastic, and of an opalescent colour, similar to that of ordinarily formed calves' feet jelly prior to being clarified for table. The fat participates in this colour in consequence of the tissues being soft and large, though containing more moisture than those of well fed hogs, which also accounts for the deficiency of elasticity; the cells are imperfectly filled with fat. From the preceding details it will be apparent that a much greater quantity of moisture or brine may be anticipated in salting an ill fed over that which will issue from a well fed hog, and in practice such is found to be the case; the moisture withdrawn is replaced on drying by crystals of salt filling up the vacant interstices, which, as these will always be much more numerous in lean than fat hogs, will cause the bacon on drying to be disagreeably salt. The far famed Westphalian hams have to be steeped prior to cooking, in consequence of this property; well fed Westphalian hams (a *rara avis*) do not require steeping prior to cooking. It is evident from the property here described that any mode of procedure which will prevent an undue flow of the sapid fluids which exist in the pork, is desirable if unattended with more than commensurate disadvantages. This can be done by applying in the first instance a sprinkling of saltpetre. Should the atmosphere, however, be very free from humidity, it may be necessary to use a little common salt, which, from its more deliquescent property, has a tendency to be-

come liquid (*brine*) by the absorption of water from the air, and the fluids in the meat thus accelerate the operation of the saltpetre. This being done, it is to be rubbed, &c., with salt in the usual manner. The action of the saltpetre when applied as described is to combine with the water of the fibres and tissues of the meat, thus causing them to contract, rendering the meat less vesicular or porous, and consequently will not retain so much salt from the brine on drying. The disadvantages are that the fibres of the meat are rendered somewhat hard. In a general way, and under ordinary circumstances of heat and humidity of the atmosphere, it is best to apply a mixture of salt and saltpetre at first. When well fed hogs are to be cured, if the atmosphere is very dry, salt alone should be applied at first, then saltpetre alone sprinkled over the meat, the brine being afterwards well rubbed in and thrown over the meat; salt *quantum suff.* to be applied subsequently. In very moist or bad curing weather, saltpetre should be applied alone at first, unless there is a fear that the meat will decay, in which case salt must be applied. From this cause it is almost impossible to cure pork in hot weather other than by using salt and saltpetre in combination. These are general rules, the result of experience, which however may be greatly modified by circumstances. Notwithstanding which, they are valuable as rules, and, if carefully attended to, will be found on trial worthy of notice. A great deal is stated by writers on the necessity of well rubbing in the salt, &c.; as this cannot be performed by the bare hand on the large scale, some curers furnish their workmen with brushes furnished with a strap nailed across the top for the hand to go through; with these the outer skin of the bacon is well rubbed. I am not inclined to put a very high value on the act of rubbing *per se*; in doing so, however, the operator necessarily more fairly distributes the salt, &c., and the whole of the skin gets softened, for nothing causes pork "*to take the salt so well*" as the whole of the skin being made soft, and in the ordinary mode of placing side upon side there always exist patches that remain hard; rubbing, continual shifting, and turning the sides almost entirely remedy this defect. For curing pork, a dry room with a trough formed of slate passing along each side and end of the room, and not more than 12 inches deep, is the best; it may, however, be made of stone, wood, or wood lined with lead. Slate and wood lined with lead will be found the best, the former to be preferred. Wood alone is the worst material that can be used.

The sides being all prepared as previously described, salt and saltpetre, alone or mixed, are to be sprinkled over each, and then laid on each other until eight, ten, or a dozen sides are heaped together, the number varying according to the thickness of the sides: half a dozen will, however, be found the most convenient number. In the course of twenty-four hours or a couple of days, according as the salt is converted into brine, the sides are removed, rubbed and replaced in an inverse order, the topmost being this time placed at the bottom. A little fresh salt is sprinkled between each course, and the brine thrown over the whole. In very damp weather, the brining should be omitted; if so, the sides should be well washed and rubbed in the brine previously to re-packing. In favourable weather for curing, once turning and replacing will be found sufficient, and will not occupy more than a week. In packing, the skin, or rind side, is invariably placed underneath. If needed, this packing, rubbing, and salting are re-

peated. When completed, the sides are taken down, wiped dry, and laid on rough canvas cloth, the first side with the skin underneath. Bay salt is now copiously strewn over it; the next side is laid with the ribs lowermost, and the skin uppermost; another side is then laid on this, with the skin lowermost; another sprinkling of salt, on which is laid a side with the ribs lowermost; the canvas wrapper is now drawn over all, and corded. This is the mode the green bacon is sent to the metropolitan market from Ireland, it being found that, if smoked and perfectly dried in Ireland, it does not preserve so well as when forwarded "green," and then stored in the vaults of the various London wharfs; from which it is drawn in order to be smoked as may be required for consumption. The west of England bacon is sent to London, ready dried, by land carriage: it is only by sea-carriage that bacon is obnoxious to damage when dried and smoked ready for consumption. In curing hams, a trough being provided as described, they should be first rubbed with a mixture of salt and saltpetre, then laid with the shank end lowest at an angle of 45 degrees, and so on with every row; at the second or third day they should be well rubbed with the brine and salt, set up as before with a little fresh salt and saltpetre; in two days more they should be again rubbed, and packed flat and as close as possible, the thick part of one row against the shanks of the next row, by which means the whole will be nearly covered with their own pickle. In a week or ten days they will be cured and ready for drying, which should be done by taking them out of the pickle, setting them upright with the shanks downwards, and a little dry salt thrown over the thick end. After being thus left for a week longer, they will be ready for hanging up in the drying house, which is in fact a slow stove. Bacon and hams are smoked by being first damped, and then thrown amongst some dry bran, which adheres to the meat, and prevents its being disfigured by the soot; they are then hung up in a flagged room, with a channel running down the centre, towards which the floor inclines on each side. Chaffers filled with sawdust are now lighted, the room is closed and left. When the fires are extinguished, and the bacon is supposed to have absorbed as much smoke as it can, the place is again entered, the bacon and hams taken down, the bran, with its attached soot, is brushed off, the bacon is now ready for market, as seen at the retailers. The fat which has dripped from the bacon in smoking is collected from the receptacle at the end of the gutter, the dirt and ashes swept out, when the place is again ready for another lot. The fine flavour of Westphalian hams is stated to be due to the circumstance of the smoking rooms being made so high that the smoke is cold when it arrives at the hams. This may be the case in part: I rather attribute their flavour to arise from the fact of the pigs being of a small thin breed, and not killed until they are at least two years old. To have a ham in perfection the hog ought to be three years old when killed: to feed such would not pay the farmer. In salting pork for bacon 1½ lb. of salt is sufficient to salt 1 stone of 14 lbs. of meat, or 16 stones (2 cwt.) would require 24 lbs. of salt; and with great care and attention ¾ oz. of saltpetre is sufficient for a stone of meat, or 1 lb. for 20 stones of meat. It is a safe practice to use 1 oz. of saltpetre to a stone of pork. These quantities are adapted to private use; large curers use more of both articles.

[TO BE CONCLUDED IN NEXT NUMBER.]

Agriculture in California.

I have spoken before of the farming operations of Messrs. Beard and Horner, in the valley of San Jose, and gave you a statement of last year's crops.

Mr. Horner cultivates this year 3,000 acres, of which about one thousand were sown and harvested too.

Wheat averaging forty bushels to the acre; the largest yield sixty. Current value about \$2 per bushel. Much injury was sustained from rust.

Barley—About 200 acres, yielding fifty bushels to the acre. The volunteer crop yielded ten bushels more per acre than the sown, and of a better quality. Quoted at 2½c. per lb.

Oats—About 200 bushels, average forty-five bushels to the acre; 2½a3c. per lb.

Potatoes—Fifteen hundred acres, averaging 250 bushels per acre. Present figures are very low—1½a 1½c per lb. A sale is reported of one million pounds deliverable from 1st November to 1st February next, at 1½c. per lb. From the immense quantity planted this season, the price will rule low.

Onions—Five acres, averaging about 20,000 lbs. per acre, a small yield. Per lb. 3½a4c.

In Corn, Cabbage, Melons, Tomatoes, Pumpkins, &c., about 90 acres.

Hay—Cut about 200 tons, at \$30a\$40 per ton.

Orchard—500 acres. Peach trees flourishing; yielding fine fruit within 18 months after planting.

In addition to his immense operations in farming, Mr. Horner is just completing one of the best flouring mills in the State, the cost of which will not be less than \$80,000. The preceding hasty sketch of this gentleman's farming operations will make some of your readers open their eyes, especially if they will figure up the totals, even at present low prices.

Inversion of the Womb in Cows.

In the convulsive efforts in order to accomplish the expulsion of the foetus, the womb itself sometimes closely follows the calf, and hangs from the bearing, as low as or lower than the hocks, in the form of a large red or violet-colored bag. This is called "*the downfall of the calf-bag.*" It should be returned as soon as possible, for there is usually great pressure on the neck of the womb, which impedes the circulation of the blood, and the protruded part quickly grows livid and black, and is covered with ulcerated spots, and becomes gangrenous and mortified; and this is rapidly increased by the injury which the womb sustains in the continual getting up and lying down of the cow in these cases.

The womb must first be cleansed from all the dirt which it may have gathered. If much swelling has taken place, and the bag looks thickened and gorged with blood, it should be lightly yet freely scarified, and the bleeding encouraged by warm fermentations. While this is done, it should be carefully ascertained whether there is any distension of the rumen, and if there is, either the common puncture for hoove should be made in the flank, or a dose of the solution of the chloride of lime administered. A distended rumen would form an almost insuperable obstacle to the return of the uterus. Two persons should now support the calf-bag by means of a strong, yet soft cloth, while, if the placenta yet remains attached to it, a third person gently separates it at every point. It would be useless to attempt to return the womb until the cleansing is taken away, for the labor pains would return as violently as before. The operator will carefully remove the little

collections, or bundles of blood-vessels, which belong to the fetal portion of the placenta, and which are implanted into the fleshy excrescences, that, for some reason never yet fully explained, grow upon the surface of the impregnated womb, and gradually disappear after the birth of the calf. If much bleeding attend this process, the parts are to be washed with a weak mixture of spirit and water. The bleeding being a little stayed, and every thing that may have gathered round the calf-bag being removed, the assistants should raise the cloth, and bring the womb on a level with the bearing; while the surgeon, standing behind, and having his hand and arm well oiled, and a little oil having been likewise smeared over the womb generally, places his right hand, with the fingers bent or clenched, against the bottom—the very inferior and farther part of that division or horn of the uterus which contained the foetus, and forces it through the passage, and as far as he can into the belly; and there he retains it, while, with the other hand, he endeavors likewise to force up the smaller horn, and the mouth of the womb. He will find considerable difficulty in effecting this, for the strainings against him will often be immense, and sometimes, when he thinks he has attained his object, the whole will again be suddenly and violently expelled. A bleeding from the jugular, and the administration of a couple of drachms of opium, will materially lessen these spasmodic efforts. The surgeon must, in spite of fatigue, patiently persist in his labor until his object is accomplished; and he will be materially assisted in this by having the cow either standing, or so placed on straw that her hinder parts should be considerably elevated.

The practitioner should be careful that the parts are returned as nearly as possible into their natural situation, and this he will easily ascertain by examination with the hand. Much of the after quietness of the animal, and the retention of the womb thus returned, will depend upon this.

Although the return of the parts to their natural situation may be tolerably clearly ascertained, yet it will be prudent to provide against a fresh access of pain and another expulsion of the uterus. For this purpose it had been usual to pass three or four stitches of small tape through the lips of the bearing; but this is a painful thing, and sometimes difficult to accomplish; and the cases are not unfrequent when these stitches are torn out, and considerable laceration and inflammation ensue.

A collar should be passed round the neck of the cow, composed of web: a girth of the same material is then put round the body behind the shoulders, and this is connected with the collar, under the brisket and over the shoulder, and on each side. A second girth is passed behind the first, and a little anterior to the udder, and connected with the first in the same way. To this, on one side, and level with the bearing, a piece of stout wrapping cloth or other strong material, twelve or sixteen inches wide, is sewed or fastened, and brought over the bearing, and attached to the girth on the other side in the same manner. A knot on each side will constitute the simplest fastening, and this pressing firmly on the bearing will effectually prevent the womb from again protruding. If it should be necessary, another piece may be carried from below the bearing over the udder to the second girth, and a corresponding one, slit in order to pass on each side of the tail, may reach from above the bearing to the upper part of the second bandage.

The cow should be kept as quiet as possible; warm mashes and warm gruel should be allowed; bleeding should again be resorted to, and small doses of opium administered if she should be restless, or the pains should return; but it will not be prudent during the first day to give either those fever medicines, as nitro and digitalis, which may have a diuretic effect and excite the urinary organs, or to bring on the straining effect of purging, by administering even a dose of saline medicine. Should twenty-four hours pass and the pains not return, the stitches may be withdrawn from the bearing, or the bandage removed.—*Youatt on Cattle.*

Souring food for Cattle and Hogs.

The cause is rather remote upon which this principle is based. It is asserted upon good authority that Rye, Barley, or Indian Corn meal, made into a mash and allowed to ferment and pass into the same state, when mixed with cut hay, straw or other dry vegetable food, exhibits the most marked fattening effects. A very consistent and observing friend of ours remarked the other day, that he could with barley meal alone, properly fermented and scoured, make hogs as fat in six weeks, as they could, or ought to be, and that he preferred such process to cooking the food, or any other method.

It is a familiar fact to all feeders of swine, that sour and coagulated milk is worth one quarter more for those animals, than fresh and sweet milk; but how its action in that state is to be accounted for, and its operation on the animal economy of the stomach, is not very apparent. It is known by the experiments of Dr. BEAUMONT, that milk and all substances capable of coagulation are almost instantly changed on mixing with the gastric juice, and the rejection of milk by the infant, immediately after suckling, also shows the fact.

Now, whether the souring of the food relieves the action of the digestive process, or whether the *acetic*, *malic*, or other acids are required by the stomach to effect secretion or stimulation, is simple conjecture. With the human subject, pickles are a favorite condiment with rich and highly concentrated food, and many delicate stomachs can endure the use of large quantities of these most indigestible and unnutritive substances, without experiencing any deleterious effects. It is generally held, that those persons who consume much acid food and use vinegar and pickles freely, are apt to be thin and spare; contrary to the doctrine of souring food. We once knew a young lady so fleshy and full of "blood and blue veins," that her skin was almost to the tension of bursting, who reduced herself to very respectable wasp-like dimensions, merely by the free use of vinegar.

Of the good effects of the souring process, when used for fattening animals, we have the most abundant proofs in our own experience, and although the *modus operandi* is not so clear to our perceptions, it is, we opine, sufficient for us to know that such is the fact, at least from its assertion by good authority, to induce our readers to try its effects and its economy.—[*Wool Grower.*

LARGE MELONS.—Yesterday there sold in this city a load of watermelons, 86 in number, weighing 2,107 pounds, 24 lbs. each. Of the number six were picked from one vine. They were cultivated on the San Joaquin, (Globe Ranch,) owned by Messrs. Groom and Wallace. They have now growing on their ranch, onions 17 inches in circumference, and weighing 2½ lbs.—*Rep. California.*

Management of Barnyard Manure by Prof. J. P. Norton.

From Norton's Elements of Scientific Farming.

The manure of various domestic animals is, in this country, most commonly employed as a fertilizer, all other manures being used in comparatively small quantities; and yet even these are seldom preserved and applied as carefully as they might, or ought to be.

The principal varieties are those of the ox, the cow, the hog, the horse, and the sheep. Of these, that of the horse is most valuable in its fresh state: it contains much nitrogen, but it is very liable to lose by fermentation. That of the hog comes next. That of the cow is placed at the bottom of the list. This is because the enriching substances of her food go principally to the formation of milk, the manure being thereby rendered poorer.

The manure of all these animals is far richer than the food given them, because it contains much more nitrogen. This is for the reason that a large part of the carbon and oxygen of the food are consumed in the lungs and blood generally for the purpose of keeping up the heat of the body. They are given off from the lungs, and also by perspiration and evaporation through the pores of the skin, in the forms of carbonic acid and water.

From animals fed upon rich food, the manure is much more powerful than when it is poor. In England, for instance, where they fatten cattle largely on oil cake, it is calculated that the increased value of the manure repays all of the outlay. This is the reason why human ordure is better than manure from any of the animals mentioned above, the food of man being rich and various.

All these kinds of manure should be carefully collected and preserved, both as to their liquid and solid parts. The liquid part or urine is particularly rich in the phosphates and in nitrogen. This part is by very many farmers permitted in a great degree to run away or evaporate. Some farmyards are contrived so as to throw the water off entirely, others convey it through a small ditch upon the nearest field. The liquid manure which might have fertilized several acres in the course of the season, is thus concentrated upon one small spot, and the consequence is a vegetation so rank as to be of very little use. Spots of this kind may be seen in the neighborhood of many farm-yards, where the grass grows up so heavy that it falls down and rots at the bottom, and has to be cut several weeks before haying time, producing strong coarse hay that cattle will scarcely touch.

The proper way to save this liquid is to have a tank or hole, into which all the drainings of the yard may be conducted. If left there long, this liquid begins to ferment, and lose nitrogen in the form of ammonia, which it will be remembered is a compound of nitrogen and hydrogen. To remedy this, a little sulphuric acid, or a few pounds of plaster, may be occasionally thrown in. The sulphuric acid will unite with the ammonia, and form sulphate of ammonia, which will remain unchanged, not being liable to evaporate. Others prefer to mix sufficient peat, ashes, sawdust, or fine charcoal with the liquid in the tank, to soak it all up; others still pump it out and pour it upon a compost heap. One point is to be noticed in the management of a tank. Only the water which naturally drains from the stables and yards should be allowed to enter it, all that falls from the eaves of the buildings should be discharged elsewhere. Regulated in this way, the tank will seldom overflow, and

the manure collected in it will be of the most valuable and powerful description. The tank may be made of stone, brick, or wood, as is most convenient, and need cost but very little.

While the liquid manure is actually in many cases almost entirely lost, the solid part is often allowed to drain and bleach, until nearly every thing soluble is washed away; or is exposed in heaps to ferment, without any covering. In such a case ammonia is always formed and given off: it may often be perceived by the smell, particularly in horse manure. The fact may also be shown, by dipping a feather in muriatic acid and waving it over the heap. If ammonia in any quantity is escaping, white fumes will be visible about the feather, caused by the formation of muriate of ammonia. A teacher can exemplify this by holding a feather, dipped in the same way, over an ammonia bottle. This escape of so valuable a substance may be in a great measure prevented by shovelling earth over the surface of the heap, to a depth of two or three inches. If this does not arrest it entirely, sprinkle a few handfuls of plaster upon the top: the sulphuric acid of the plaster will as before unite with the ammonia, and form sulphate of ammonia.

Manures containing nitrogen in large quantity are so exceedingly valuable, because this gas is required to form gluten, and bodies of that class, in the plant; this is particularly in the seed, and sometimes also in the fruit. Plants can easily obtain an abundance of carbon, oxygen, and hydrogen, from the air, the soil, and manures. Not so with nitrogen. They can not get it from the air; there is little of it in most soils; and hence manures which contain much of it, produce such a marked effect. Not that it is more necessary than the other organic bodies, but more scarce; at least in a form available for plants. The same reasoning applies to phosphoric acid. It is not more necessary than the other inorganic ingredients; but still is more valuable, because more uncommon in the soil and in manures.

In all places where manure is protected from the sun, and from much washing by rain, its value is greatly increased.

a. Horse manure particularly should not be left exposed at all: it begins to heat and to lose nitrogen almost immediately, as may be perceived by the smell. It should be mixed with other manures, or covered by some absorbent earth, as soon as possible. Almost every one who enters a stable in the morning, where there are many horses, must perceive the strong smell of ammonia that fills the place. I have seen in some stables, little pans containing plaster of paris or sulphuric acid, for the purpose of absorbing these fumes, and forming sulphate of ammonia. b. The liquid which runs from barnyards and from manure heaps, is shown by analysis to consist of the most fertilizing substances; and it is calculated that where this is all allowed to wash away, as is the case in many instances, the manure is often reduced nearly one-half in its value. I have seen yards where it was almost worthless, owing to long exposure.

The farmers of this country need awakening upon the subject of carefully preserving their common manures. In Flanders, where everything of the kind is saved with the greatest care, the liquid manure of a single cow for a year is valued at \$10; here it is too often allowed to escape entirely. Either they are very foolish, or we are very wasteful.

A word of kindness. It is a seed which, even when dropped by chance, is sure to spring up a flower.

Palmer's Improved Horse Power.



THE annexed illustration gives a perspective view of Palmer's New and Improved Horse-Power, which, though originally designed by the inventor to accompany his threshing machines, (before described,) is well adapted and fitted to be used whenever power is needed, and in combination with any kind of machinery.

It is distinguished from horse powers ordinarily in use, by being so constructed that any required length of leverage—from *twelve to twenty-five feet*—may be obtained and rendered available, and that two, three, or even a greater number of bands, may be worked at the same time, and thus motion be applied, at one and the same time, to various kinds of machinery. From the increased length of leverage obtained in this machine over ordinary horse-powers, the power applied is rendered much more effective; while at the same time all liability of accident to the user is removed by the peculiar manner in which the power is transferred, and which is done without the necessity or use of cogs, cog-wheels, and shafts.

Power or motion is transferred from the horse-power, by means of bands, or chains, playing in points of support attached to the *ends* of the arms or levers, by which arrangement the power is not only used at the best advantage—length of leverage being considered—but it is also made available without a necessity for cog-wheels or shafts, and, therefore, with much less loss from friction.

By means of a series of conical pulleys on the large wheel attached to the horse-power, and from which motion is imparted to any required machinery, different velocities may be given, so that the horse-

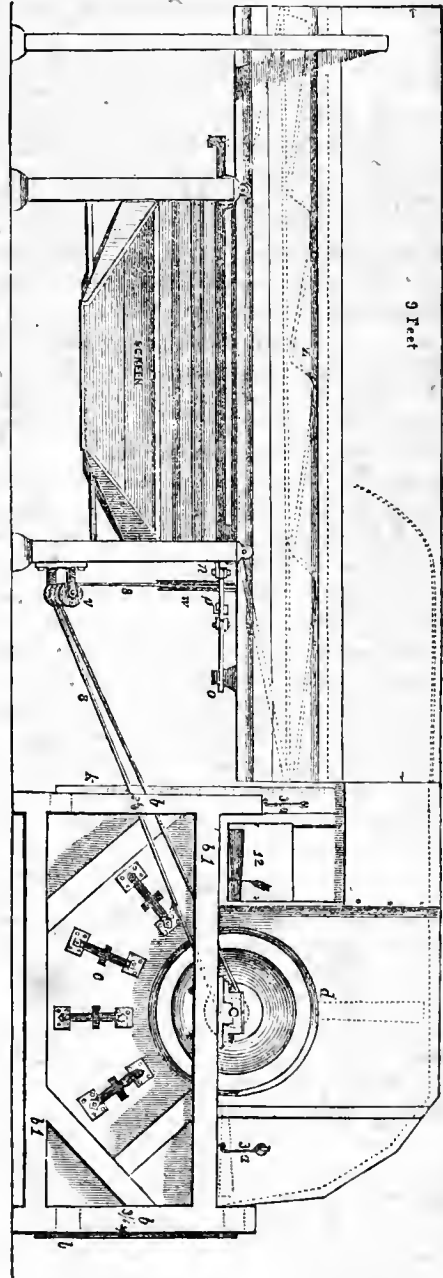
power may be adapted to different uses, where different resistances are to be overcome.

This improved horse-power is peculiarly well adapted to driving an upright or other saw, wherever their use is desired, as the velocity of the saw may be readily varied according to the character of the wood or material to be acted on; and such saws will be furnished in connection with the horse-powers, whenever they may be desired.

These powers are also simple in their construction, not liable to get out of order, and may be made (ex-

cepting the few castings, and the other iron work) by any intelligent farmer or mechanic; and they are also so framed and put together that they can easily be separated into several parts, and be rendered compact and convenient for transportation or storage.

Palmer's American Rotary Seed and Grain Thresher.



And the crowd of agricultural implements on exhibition at the Crystal Palace, we find Palmer's American Rotary Seed and Grain Thresher, a repre-

sentation of which we have annexed, with its straw separator and winnower attached. This machine has all the advantages of the common flail in threshing, and not as liable to injure the grain or seed as the common spike thresher. It is a labor saving machine, simple in its construction, not liable to get out of repair, and is so made that none of its parts can be dislodged by the great speed given to the rotaries, and thus the liability to accident, which in other threshers so often results in loss of limb, if not of life, is avoided and prevented.

The great and distinguishing feature of this thresher, however, is, that it can be so fixed or adjusted that it will thresh, with equal perfection, all the different kinds of seed and grain, as grass, flax, and clover seed, oats, barley, wheat, rye, peas, and rice—Indian corn alone excepted—and thus enable the farmer to thresh *all* his crop of *every* character, and with the same machine. This end is attained by means of the castings on the inner side of the trough or flail-case, called rubbers, which have mill-like furrowed surfaces, and which are capable of being placed nearer to or farther from the track of the rotaries. The machines are manufactured by Messrs. Coggeshall & Co., 643 Water street, New York, to whom we refer for further particulars.

DESCRIPTION.—*b, b, b*, are the frame of machine; *d*, one of the rotating flails; *I*2, place where the grain is fed; *e*, contrivance for regulating the adjustments of the rubbers on the inside of the flail case; *k* is the slide to change the delivery of the straw or grain; *o*, *p*, shaking lever, to move the screen; *w*, the wheel of the winnower, a vertical view; *S, S*, bands, transferring motion to the winnower from the thresher; *Z*, wire screen, to carry off the straw. The grain and straw are discharged directly over the place where they are fed into the machine. The rotaries revolve in the direction indicated by the arrows. The figures indicate the dimensions of the timbers.

For the Farm Journal.

Dwarf Pears.

There is probably no branch of Horticulture more justly claiming the attention of Farmers and market men generally, than the cultivation of Pears on Quince Stocks; the maxim that trees will not succeed well for any length of time where they are grafted on any other than their own species, does not apply here, as many varieties of the Pear grow vigorously, and bear abundantly of delicious fruit and more exquisite flavor than on their own roots. The impression that had prevailed to some extent, unfavorably to the cultivation of the Pear on the Quince has rapidly disappeared before the solid arguments contained in the large dishes filled with luscious fruit, thus grown on trees but recently transplanted and exhibited at our late Agricultural Fairs—one of our enterprising farmers John Chambers of Burlington co., being sensible of

the scarcity of Pears and the facility with which they can be produced on dwarfs set out an orchard of one thousand trees about two years since, and at our late fair at Mount Holly Exhibited of his crop thirty-nine varieties of Pears of great beauty, reflecting much credit on his energy and good treatment, and for which he obtained the highest premiums, and after the show was over to convince the spectators that they possessed real worth, as well as beauty he offered them at public sale the finest being Duchess d' Angouleme went off readily at four dollars per dozen, the next in value St. Michael Archange, Louis Bonne d' Jersey and other choice varieties descending in price by regular gradations until those of least value were closed out at fifty cents per dozen.

The inoculation should be near the ground, so that when transplanted union may be placed below the surface. It may not yet be ascertained how long they will last, but we have records of them over one hundred years old and still healthy, my own trees that have been standing in the orchard about five years have born half a bushel each at a time, in New England it is stated that pear trees on the Quince root which are twenty-five years old produce annually a barrel or more of fruit each, and appear destined to survive as long as any on the pear root. As they admit of close planting and mature their fruit within one or two years from the time they are transplanted in the orchard, large profits may be taken from an acre of ground before any return could be obtained from them on pear stocks. In planting an orchard for myself I have set the trees 8 by 12 feet apart which gives plenty of room for driving a wagon between the rows to apply manure, and will require 453 trees per acre:

Since the peach crop has become so uncertain in this vicinity and the dearth of choice fruits in our markets; I know of no other fruit so easily raised in the open field, giving as fine a prospect of a rich reward to farmers and market men as Dwarf Pears.

WILLIAM PARRY:

Cinnaminson, N. J., 10th mo. 25 1853.

To raise Hyacinths in Glasses.

The following from Hovey's Magazine, contains all necessary directions to succeed with these beautiful appendages of the parlor or drawing room in winter. When grown in pots there is less difficulty, in obtaining a fine bloom than in the glasses; unless shaded for a few days, in the latter as described below, the tops will push out, and begin to flower before the roots have grown sufficiently to support it and the bloom will be consequently short lived and imperfect. If the glasses are clear, they should be shaded by covering with dark paper. We have generally changed the water once in a week or ten days: "When it is desired to grow hyacinths in glasses with water, good sound large roots should be selected;

the glasses should be of some dark color, such as blue, purple or green, or else opaque, as the roots shun light, and therefore, do not thrive well in clear glasses. The glasses should be filled with rain, or river water, up to the neck, or so far that the ring at the bottom of the bulb only should touch the water. They should then be put into a dark, warm closet until the bulb has emitted roots, and the shoot from the crown has grown about half an inch in height; it should then be placed in a shady part of the room for four or five days, but not over a mantel piece, or near a fire, or in a strong draught of air; and afterwards be removed to a window with a sunny exposure, giving air by raising the sash for two or three hours during the middle of the day, when the sun shines. On no account should they be placed outside the window, as the cold harsh winds which prevails at this season effectually check their growth. The water should be changed about once in two or three weeks; the glasses should be turned on one side, and the roots partially withdrawn to let the water flow out freely, as, when the roots are wholly withdrawn, it is difficult to replace them without seriously injuring them.

"The single hyacinths are generally the best for blooming in water.

"A very pretty effect is produced by growing hyacinths in moss. For this purpose, an open-worked French basket may be procured, and a lining of moss placed inside; a glass or other dish is also to be placed in it, and this dish is to be filled up with moss in which the bulbs are to be placed; the is then to be well moistened with water, and the bulbs treated as directed for those grown in glasses, only that an excess of water is to be avoided, as if the water covers the bulbs, they will decay. A rather singular effect is also produced by taking a rather large sized turnip, and scooping it from the root end, until it is about half an inch in thickness, filling up the body of the turnip with mould, and planting a hyacinth in it, and then suspending the turnip by three ribbons or otherwise. The leaves of the turnip will shoot out and turn upwards completely hiding the roots, and making a very pretty vegetable flower pot."

Wonderful Trees.

AMONG the remarkable trees in the world, the following, of which we have compiled brief descriptions, are some of the most curious. We take it from the *Journal of Education*:

The Great Chestnut Tree.—On the one side of Mount Etna there is a famous chestnut tree, which is said to be one hundred and ninety-six feet above the surface of the ground. Its enormous trunk is separated into five divisions, which give it the appearance of several trees growing together. In a circular space formed by these large branches, a hut has been erected for the accommodation of those who collect the chestnuts.

The Dwarf Tree.—Captains King and Fitzroy state that they saw a tree on the mountains near Cape Horn, which was only one or two inches high, yet had branches spreading out five feet along the ground.

The Sack Tree.—There is said to be a tree in Bombay called the sack tree, because from it may be stripped very natural sacks, which resemble "felt" in appearance.

The Ivory-nut Tree.—The Ivory-nut tree is properly called the Tagua plant, and is common in South

America. The tree is one of the numerous family of palms, but belongs to the order designated as screw pine tribe. The natives use the leaves to cover their cottages, and from the nuts make buttons and various other articles. In an early state the nuts contain a sweet milky liquid, which afterwards assumes a solidity nearly equal to ivory, and will admit of a high polish. It is known as ivory-nut, or vegetable ivory, and has recently been brought into use for various purposes.

The Brazil-nut Tree.—The Brazil-nut tree may justly command the attention of the enthusiastic naturalist. This tree thrives well in the province of Brazil, and immense quantities of its delicious fruit are annually exported to foreign countries. It grows to the height of from fifty to eighty feet, and in appearance is one of the most majestic ornaments of the forest. The fruit, in its natural position, resembles a cocoa-nut, being extremely hard, and of about the size of a child's head. Each one of these shells contains from twelve to twenty of the three-cornered nuts, nicely packed together. And to obtain the nuts as they appear in market, these shells have to be broken open. During the season of their falling, it is dangerous to enter the groves where they abound, as the force of their descent is sufficient to knock down the strongest man. The natives, however, provide themselves with wooden bucklers, which they hold over their heads while collecting the fruit from the ground. In this manner they are perfectly secure from injury.

The Cannon-Ball Tree.—Among the plants of Guinea, one of the most curious is the cannon-ball tree. It grows to the height of sixty feet, and its flowers are remarkable for beauty and fragrance, and contradictory qualities. Its blossoms are of a delicious crimson, appearing in large bunches, and exhaling a rich perfume. The fruit resembles enormous cannon balls, hence the name. However, some say it has been so called because of the noise which the ball makes in bursting. From the shell, domestic utensils are made, and the contents contain several kinds of acids, besides sugar and gum, and furnish the material for making an excellent drink in sickness.—But, singular as it may appear, this pulp, when in a perfectly ripe state, is very filthy, and the odor from it is exceedingly unpleasant.

The Sorrowful Tree.—At Goa, near Bombay, there is a singular vegetable—the sorrowful tree, so called because it only flourishes in the night. At sunset no flowers are to be seen; and yet, half an hour after, it is quite full of them. They yield a sweet smell, but the sun no sooner begins to shine upon them, than some of them fall off, and others close up; and thus it continues flowering in the night all the year.

The Cow Tree.—This tree is a native of Venezuela, South America. It grows in rocky situations, high up the mountains. Baron Von Humbolt gives the following description of it:—On the barren flank of a rock grows a tree with dry and leathery leaves; its large, woody roots can scarcely penetrate into the stony soil. For several months in the year, not a single shower moistens its foliage. Its branches appear dead and dried; yet, as soon as the trunk is pierced, there flows from it a sweet and nourishing milk. It is at sunrise that this vegetable fountain is most abundant. The natives are then to be seen hastening from all quarters, furnished with large bowls to receive the milk, which grows yellow and thickens at the surface. Some drain their bowls under the tree, while others carry home the juice to their children; and you might, as the father returned with this

milk, fancy you saw the family of a shepherd gathering around and receiving from him the production of his kine. The milk, obtained by incisions made in the trunk, is tolerably thick, free from all acidity, and of an agreeable and balmy smell. It was offered to us in the shell of the calabash tree. We drank a considerable quantity of it in the evening before going to bed, and very early in the morning, without experiencing the slightest injurious effect.

The Bread Fruit Tree.—This tree is found on the islands in the Pacific Ocean. The trunk rises to the height of thirty to forty feet, and attains the size of a man's body. The fruit grows to about the size of a child's head. When used for food, it is gathered before it is fully ripe, and baked among ashes, when it becomes a wholesome bread, and in taste somewhat resembles fresh wheaten bread. This is a very useful tree to the natives; for, besides its fruit, its trunk furnishes timber for their houses and canoes; the gum which exudes from it serves as pitch for their vessels, and from the fibres of the inner bark, a cloth is made to cover their persons.

The Upas Tree.—For some ages it was believed that a tree existed in the East Indies which shed a poisoning, blighting and deadly influence upon all animals that reposed under its branches; and that so fatal were its effects, that birds attempting to fly near it, fell to the ground and perished. For several years past, there being no reliable authority that such a tree really existed, it has generally been supposed among the intelligent to be fabulous, and hence termed the "fabled Upas tree." But a few years since, a tree was discovered in a peculiar locality in the East Indies, which it is believed gave rise to the wonderful accounts of the Upas tree. In the location where this modern Upas tree was discovered, there is a constant and dense collection of carbonic acid gas; consequently all animals that come near it, die by breathing the poisonous gas. The cause of such an abundance of gas being collected in the locality of these trees is unknown. A few months since, a tree was discovered on the Isthmus of Darien, which appears to have a similar influence on animal life. The Panama *Laid* says:—"A man named James Linn, being tired, laid down under a tree to sleep, and on waking, found his limbs and body swollen, and death soon followed." Cattle avoid eating and ruminating under this tree.

The Tallow Tree.—This tree is found in China. It is called the tallow tree, because a substance is obtained from it resembling tallow, and which is used for the same purposes. It grows from twenty to forty feet in height.

Lace Bark Tree.—In the West Indies is found a tree, the inner bark of which resembles lace, or net-work. This bark is beautiful, consisting of layers which may be pulled out into a fine white web, three or four feet wide. It is sometimes used for ladies' dresses.

FRENCH MERINO BUCKS.—Messrs. W. & P. Brady, of Ohio county, Va., shipped from Wheeling, on Friday, on the Baltimore and Ohio Railroad, three of their finest French Merino bucks, and three ewes, for exhibition at the Maryland and Virginia State Fairs. Among them is their celebrated Gilbert buck, which has so often taken the first premium, and for which, it is said, \$1000 was offered and refused at the Pennsylvania State Fair. The clip of this one buck alone, last April, was 31½ pounds.

The Husband's Complaint.

RESPECTFULLY DEDICATED TO ALL WHOM IT CONCERNS.

I hate the name of German wool in all its colors bright;
Of chafes and stools in fancy work I hate the very sight;
The shawls and shippers that I've seen—the ottomans and hags—
Sooner than wear a stitch on me, I'd walk the street in rags.

I've heard of wives too musical, too talkative, or quiet—
Of scolding or of gaming wives, and those too fond of riot;
But yet, of all the errors known which to the women fall,
Forever doing fancy work I think exceeds them all.

The other day when I came home, no dinner got for me:
I asked my wife the reason, and she answered, "One, two, three!"
I told her I was hungry, and I stamped upon the floor;
She never even looked at me, but murmured "One green more."

Of course she makes me angry, though she doesn't care for that,
But chatters, while I talk to her, "One white and then a black;"
One green, and then a purple—(just hold your tongue, my dear;
You really do annoy me so)—I've made a wrong stitch here."

And as for confidential chat, with her eternal frame,
Though I should speak of fifty things, she'd answer me the same.
'Tis "Yes, love—five reds, then a black—(I quite agree with you)—
I've done this wrong—seven, eight, nine, ten—an orange, then a blue."

If any lady comes to tea, her bag is first surveyed;
And, if the pattern pleases her, a copy then is made.
She states the men quite out of face—and when I ask her why?
'Tis "O! my love, the pattern of his waistcoat struck my eye!"

And if to walk I am inclined ('tis seldom I go out),
At every worsted-shop she sees, oh! how she looks about,
And says, "Bless me! I must go in: the pattern is so rare;
That group of flowers is just the thing I wanted for my chair."

Besides, the things she makes are all such touch-me-not affairs,
I dare not even use a stool or screen; and, as for chairs,
'Twas only yesterday I put my youngest boy in one,
And until that I never knew my wife had such a tongue.

Alas! for my poor little ones, they dare not move or speak;
'Tis "Tom, be still; put down that bag. Why, Harriet, where's a year
feet?"

Marla! standing on that stool! it was not made for use:
Be silent all. Three greens, one red, a blue, and then a puce."

Oh! Heaven preserve me from a wife with fancy-work run wild,
And hands which never do ought else for husband or for child.
Our clothes are rent, our bills unpaid, our house is in disorder;
And all because my lady wife has taken to embroider,

I'll put my children out to school—I'll go across the sea;
My wife, so full of fancy-work, I'm sure cannot miss me.
E'en while I write she still keeps on her "One, two, three, and four."
She's apt all hope. Those Berlin wools, I'll not endure them more!

Varieties of Grapes.

MR. ROBERT BUCHANAN, in his recent work on the Grape Culture, gives the following varieties of grapes cultivated in the Cincinnati vineyards, with his views in regard to their relative value:

1. The Catawba is our great wine grape, and stands without a rival. Mr. Longworth has offered five hundred dollars' reward for a better native variety, and several new seedlings have been produced, but its equal has not yet been found. It is subject to rot.

2. Cape; this old favorite of former days is now almost displaced by the Catawba. It is still cultivated in some vineyards, but, not extensively—very hardy variety, and but little affected by the rot.

3. Isabella; a variety much esteemed in some of the Eastern States, particularly about the city of New York, where it ripens better than here. It is almost abandoned as a wine grape, and generally cultivated only for table use. A hardy variety, subject less to rot than mildew—in some seasons ripens badly.

4. Bland's Madeira; a delicious table grape, resembling the Catawba in its appearance. Too tender for vineyard culture in this climate. On arbor, in sheltered situations, it bears well.

5. Ohio, or Cigar Box, is a fine table grape, bunches very large and shouldered, berries small, black, sweet, and without pulp; does well on arbors or trellises, but will scarcely answer for the vineyard culture—requires long pruning.

6. Lenoir; a black grape, bunches large and compact, sometimes shouldered, without pulp; berries

small, black, sweet and palatable. Subject, in clay soils, to mildew and rot.

7. Missouri; fruit black, bunches loose and of medium size, berries without pulp, sweet and agreeable. Sometimes cultivated in vineyards.

8. Norton's Seedling; bunches of medium size, compact shouldered; berries small, purple, sweet, but with a pulp.

9. Herbemont's Madeira; a good wine and a very pleasant table grape; bunches medium size, berries small, black, and without pulp.

10. Minor's Seedling; a new grape of the Fox family. Fruit: bunches medium size, berries large, pulpy, musky, and rich flavored, very hardy; but little subject to rot. This grape will probably be found a valuable variety for the vineyard.

11. White Catawba; a new seedling from the Catawba, but far inferior to the parent. Bunches medium size, shouldered; berries white, large, round, and pulpy; in taste like the Fox Grape.

12. Mammoth Catawba; another new seedling, resembling the Catawba in color, but not so well flavored. Bunches large, shouldered; berries very large, round, pulpy; in some seasons subject to fall off before ripening.

Mr. Longworth, in a letter to the Cincinnati Horticultural Society, remarks: "I have for thirty years experimented on the foreign grape, both for the table and for wine. In the acclimation of plants I do not believe; for the White Sweet Water does not succeed as well with me as it did thirty years since. I obtained a large variety of French grapes from Mr. Loubat, many years since. They were from the vicinity of Paris and Bordeaux. From Madeira I obtained six thousand vines of their best wine grapes. Not one was found worthy of cultivation in this latitude, and were rooted from the vineyards. As a last experiment, I imported seven thousand vines from the mountains of Jura, in the vicinity of Salines, in France. At that point the vine region suddenly ends, and many vines are there cultivated on the north side of the mountain, where the ground is covered with snow the whole winter, from three to four feet deep. Nearly all lived, and embraced about twenty varieties of the most celebrated wine grapes of France. But after a trial of five years, all have been thrown away. I also imported samples of wine made from all the grapes. One variety alone, the celebrated Arbois wine, which partakes slightly of the Champagne character, would compete with our Catawba.

"If we intend cultivating the grape for wine, we must rely on our native grapes, and new varieties raised from their seed. If I could get my lease of life renewed for twenty or thirty years, I would devote my attention to the subject, and I would cross our best native varieties with the best table and wine grapes of Europe. We live in a great age. Discoveries are daily made that confound us, and we know not where we shall stop. We are told of experiments in mesmerism, as wonderful as the grinding-over system would be; but I fear the discovery will not be brought to perfection in time to answer my purpose, and I must leave the subject with the young generation.

"I have heretofore wanted faith in the doctrine of French horticulturists, that to improve your stock of pears, you must not select the seed of the finest fruit, but of the natural choke-pear. I am half converted to their views. The Catawba is clearly derived from the common Fox grape. In raising from its seed, even white ones are produced, but I have not seen

one equal to the parent plant; and in all, the white down on the under side of the leaf, and the hairs on the stalk, common to the wild Fox grape, are abundant."

Native and Foreign Fruits.

BY S. L. GOODALL, SAGO, ME.

It has been so often said that native varieties of fruit are necessarily better adapted to the locality where they grew, because, thus growing, they acquire characteristics peculiarly fitting them to such place, that the idea has almost passed into an axiom, and is assented to by perhaps a large majority of cultivators, and any attempt to advance an opinion at variance with it may appear simply ridiculous. Yet, as everybody in this happy country is at liberty to be just as ridiculous, or just as heretical as he pleases, you will doubtless give me leave to say that one individual does not assent to it.

I am reminded of the subject at this time by the following passage in an article "On raising fruits from seed," in the August number of the *Horticulturist*: "A variety springing up from the seed, in any given locality, is, in the course of its production, endowed with a constitution and habits adapted to that locality, in a particular manner." &c. Now, if I understand the writer, he means to assert that sometime between the germination of the seed and the production of fruit, the plant is endowed with its constitution and habits, and that these vary according to locality. If he does not mean this I take no exception to it; but if he does—and what other construction can be fairly put on the words "springing up from seed,"—I join issue with him and advance the opinion that it does not teach the facts in the case, but that, contrariwise, the habits and constitution are decided or bestowed during the growth of the seed from which the plant is destined to spring, and that when this seed is once matured, it contains wrapped up within it that which stamps indelibly the character of the tree and fruit to grow from it, and that the accident of locality, soil, climate, or other, affects only the development of that character and not the character itself.

It is no part of my attempt to explain the laws which govern the production of varieties, for I believe that those who have bestowed most research into them have the liveliest sense of their ignorance. All I maintain is, that whatever they may be, their operation is at an end before the germination of the seed. We hear no such notions advanced as to the necessary superiority of native varieties, by practical gardeners, in respect to vegetables. They take the utmost pains to procure seed possessing the requisite qualities; but having planted it, do they attempt to change these qualities? Not at all. They labor diligently, and only to secure the most favorable conditions for their development, leaving the production of new and varied properties to successive generations, from seed, and anticipate such changes only in the seed.

We might ask what is a native? The child of European parents, born the day after arrival here, may be, technically, a native; but is it the less of foreign origin? The Swedish turnip has been grown here many years, and yet is commonly denominated a foreign variety. The *Petre* pear grew from a seed matured in England, and because that seed was brought across the water and planted in Pennsylvania it is called a native fruit, and so entitled to con-

sideration as possessing the supposed excellencies of a native sort. Do such frivolous distinctions make any difference? Does anybody suppose that scions of the *Petre* pear sent to England would produce a fruit varying from what would have grown had the seed been originally planted there?—provided, of course, that the conditions of development in each case are equally favorable to the *health*, simply, of the tree. Or, if the seed which produced the *Dix* pear had been sown in Belgium, and not in Boston, and trees or scions thence brought to Boston, would the tree have proved less adapted to cultivation in Massachusetts, or the fruit worse?

If the current opinion be correct, we ought always to find fruits better where they originate than elsewhere. Is it so? Can no one recollect instances of fruit, which originated in the Eastern States, being returned from the west so changed for the better as to escape recognition by the most critical judges until scions again set here, and afforded their former facilities for development, produced a well known and easily recognized acquaintance of former years? The *Rostiezer* is understood to be a seedling of Germany, where it yielded a second or third rate fruit; but trees or scions brought here, produce a fruit so much superior, as to be almost, if not quite, a standard of excellence in its season, and the tree proves as hardy as any native of Maine—and surely we ought to know something about hardiness where the mercury sometimes (rarely, to be sure,) freezes in the thermometer.

Suppose you plant a pear seed at Rochester, and it yields a desirable fruit, and you send me scions, which upon trial here prove unable to withstand the severity of winter, what does it prove? If it proves anything, only this—that if the tree had been grown here, it would not have survived to bear fruit, for seedlings are more tender in infancy than at adult age. You send scions to other distant places, and in one it is found of better flavor and in another worse; in one more productive, and in another less. And this only shows that had the tree grown in either of these localities it would have been deemed more or less valuable.

Experience teaches that some fruits are adapted to a wide range of soil and climate, and others restricted to narrow limits. What could there have possibly been in the accidents connected with the growth of the seedling *Newtown Pippin*, which deprived it of the capability of developing its excellence away from the neighborhood of the Hudson? or what endowed the seedling *Green Gage* with the power to exhibit its worth through scores of degrees of longitude, and nobody knows how many of latitude. Nothing at all. The endowment lies further back—viz., in the seed. The proposition here combatted seems to me to have been assumed from the first, rather than proved, and so plausible as to have escaped examination, thus leading many astray.

Was not even Downing somewhat wide of the mark when he penned the following sentence—"That in proportion as a variety has been brought originally from a locality in Europe most nearly similar to that where we would grow it, are its vigor and productiveness retained in our soil." Now, take the *Flemish Beauty*, which is named as perhaps the best proved of any foreign variety in this locality, as perfectly hardy, (more so than the *Pilton*, which is credited to Maine, though the seed grew in Massachusetts, or than the *McLaughlin*, of which, by the way, nobody can tell the origin, the oldest known trees here being grafted,) perfectly healthy, abun-

dantly productive, vigorous in growth, and the fruit fairer than as grown in Massachusetts and New York, and tell me what are the particular items of similarity between Belgium and Maine which caused this fruit to retain its vigor and productiveness here?

Let me not be understood, by any means, as undervaluing native fruits. Nobody thinks more highly of them, or would more strongly urge their production by every cultivator; only I do not believe in such a rapid manufacture of a *native* that one generation, or two, or five will develop the highest degree of excellence. There is doubtless a nucleus of truth, to which this, that I maintain to be error, has attached itself. Rare is it for any error to obtain extensively which has not truth enough to hold on by.

The same paper, by Downing, from which the above quotation is taken, has the following, which may indicate what it is: "There appears to be something in our new soil, and distinct climate, which imparts new vital powers and gives a new type to the offspring of an old stock in the vegetable races of the other continent." Perhaps a different formula may approximate towards an indication of it, to wit: That there is in the productions of nature a *tendency* implanted by the beneficent Creator to *change* it into a type specially adapted to the peculiarities of each locality, and this by successive generations from the seed. We see such a tendency with unusual clearness in the case of maize or Indian corn. Plant seed, adapted to one locality, in another at a distance, and year by year we gradually find it varying, until at length it reaches the type best adapted to its new situation. Something analogous to this may prevail among fruits; but whether just so or not, go on to plant seeds and continue to plant, and when you obtain a desirable acquisition, (your judgment being, perhaps, unconsciously warped by parental fondness,) don't spend the remainder of your energy in extolling its wonderful merits as a native, but rejoicing in the accomplishment of one step, go on in the right direction to cross breed it with others of known merit, and so effect another advance in what may prove a long race before the highest attainable point of excellence is reached.—*Horticulturist*.

MISCELLANEOUS ITEMS.—Twelve thousand bushels of cranberries were brought to Boston on Saturday, nearly all of which met with an immediate sale to provision dealers. They brought \$1.75 per bushel. The public will probably be able to get them for about \$3 per bushel. Large tracts of waste, marshy land on Cape Cod have, within the last two years, been planted with cranberry vines, and have cleared their owners a handsome sum.

Judge Vondersmith, of Lancaster, has succeeded in bringing to maturity a "*Victoria Regia*" plant—the Queen of the floral world—which bloomed during Saturday and Sunday, the 22d and 23d ult. The flower is said to have been beautiful and gorgeous beyond description. It measured eleven inches in diameter, and the leaves of the plant six feet.

Words ought to carry their sense and signification, and they ought never to be obscure. Word is a habit which we give imagination, in order to clothe thought, and make it better known by the color by which it is painted; but it is a cloak which ought not to conceal it; it is a head-dress, not a mask; it ought to set it off, and serve as an adornment, and not hide it from the eyes and envelop it in a disguise.—*La Pretieuse*.

The National Horse Exhibition.

This exhibition, the first of its kind in this country, was gotten up, managed, and carried to its conclusion, in the very best style, and such as our friends in New England only know how to do. The history from the beginning of the whole proceedings, premiums, letters and speeches from public men invited to attend, &c., occupy one entire number of the *Valley Farmer*, published at Springfield, Massachusetts, the place where it was held. Whatever they undertake to do, in what is called the "Yankee Nation," it seems to be with the determination to do it, and to know no such word as fail, as is well expressed in the following toast, from Gov. Floyd, of Virginia, at the dinner, (for a good dinner, and plenty of invitations to distinguished men, to be present, are considered as a necessary part of the programme in New England,) "*Massachusetts Men, and Massachusetts Horses*. Upon whatever theatre they exhibit, or upon whatever course they enter, they are destined to win, and deserve to win the admiration of the American people."

Letters in reply to invitations were received from William H. Seward, Gov. Clifford, Gov. Seymour, Rufus Choate, Samuel H. Cox, Thomas H. Benton, Edward Everett, R. C. Winthrop, O. W. Holmes, Levi Lincoln, and many other distinguished public men, some of whom were present, and made speeches. Invitations were also extended to several hundred editors in various parts of the Union. The exhibition lasted four days; we condense from the *Valley Farmer*, some extracts, from its report which we think will be of general interest, and also two of the speeches made on the occasion, one from C. P. Holcomb, of Delaware, lately returned from Europe, a practical farmer himself of the first order, who can hold the pen, and use the tongue, with as much facility and success as he does the plough, and the other from George M. Atwater, who appears to have been the originator of the Exhibition.

As regards the inception of the enterprise, the *Valley Farmer* remarks: That the public might become assured of the thorough responsibilities of the parties engaged in the exhibition, and of the truly National character and intent of the enterprise, MARSHALL P. WILDER, President of the United States Agricultural Society, was applied to for the endorsement and co-operation of that organization. Mr. Wilder replied in the most cordial terms, and entered enthusiastically into the plans of the exhibition, promising the attendance and assistance of a delegation from that Society, and the publication of the reports of the exhibition in its journal. With funds pledged, the organization of the Board of Managers and General Committee complete, and moving under the cheerfully accorded auspices of the National Agricultural Society, the operations went on with alacri-

ty. The following are the names of the EXECUTIVE OFFICERS OF THE U. S. AGRICULTURAL SOCIETY.

MARSHALL P. WILDER, of Mass., President.
CHARLES B. CALVERT, Md., MOSES NEWELL, Mass., JOHN A. KING, N. Y., ARTHUR WATTS, Ohio, ALFRED L. ELWYN, Pa., RICHARD PETERS, Va., J. D. WESTON, D. C., J. C. G. KENNEDY, D. C., WILLIAM S. KING, of Mass.

Circulars were then issued to breeders and owners of horses, and to persons and organizations interested in horses, explaining the objects of the exhibition, naming its organization, stating its rules and regulations and its list of premiums, amounting to \$2,500 in the aggregate. These premiums, as stated in the circular, varied from \$200 for the best Stallion of seven years old, to \$20 for the lower grades of more common animals. In addition to the premiums offered, a diploma, beautifully designed and executed for the exhibition, was obtained for award to exhibitors who, not winning premiums, still deserved to have the excellence of their animals recognized. The design of the diploma is very tasteful. At the top is an allegorical group, representing Commerce and Agriculture flourishing under the auspices of Peace, and protected by the genius of America, and the eagle of the Union. In each corner is a spirited engraving;—one exhibiting the Indian mode of hunting the Buffalo; the other representing a Missouri savage holding the wild steed, and watching with amazement the new "iron horse," drawing its rattling train across the prairie.

The managers of the Railroads centering in Springfield, with a liberality and an enlarged view of the necessities and proprieties attached to the enterprise which do them much credit, co-operated with the Committee, by agreeing to carry the horses entered for the exhibition over their roads free of charge, and by becoming subscribers to the guarantee fund.

With the good sense and foresight which has so distinguished the managers of the exhibition, it was seen that a mere show of animals, beautiful though they might be, and eloquent though they might be in proclaiming some of the objects of the exhibition, would still, without the language of human speech, lack that influential voice upon the country which would tell most effectually for the objects of the exhibition. It was seen that these objects must take form in the thoughts of great minds, and achieve a concrete shape in those literary moulds where, in this age more than any other, ideas are prepared for the public so as to present at one glance their symmetry, grace, utility and beauty. In other words, the exhibition—its objects, its interests, its spirit, its enterprise, its trials, its triumphs, and its general aims and tendencies—must have a voice, and that voice must be uttered upon the spot, and under the inspiration of the occasion. To meet this indication and exigency, it was determined to hold upon the grounds a GRAND AGRICULTURAL BANQUET, its more solid provisions to be graced with the fruits and flowers of the season, from the hands of voluntary contributors in every part of the country around, and to this banquet to invite the eminent men of the country—men whose presence would lend dignity to the occasion, and whose speech would give the voice potential to the spirit and objects of the exhibition.

FIRST DAY—WEDNESDAY, OCT. 19.

The opening of the first *National Exhibition of Horses* ever held in this country took place on Government Square, in this city, on Wednesday morn-

ing. Never shone a more auspicious and kindly sun on any enterprise, than that which greeted the assembling multitude on this occasion. To those who labored through weeks of anxiety for the consummation so successfully achieved, the pleasure experienced was something deeper than the emotions of triumph—it was gratitude. The sky was blue above, the sun shone warmly through the gauzy haze, the flags which crowned the tents and every prominent object, hung lazily upon their masts, and old Autumn wore his brightest smile, as unseen fingers from his bejewelled trees dropped silently their treasures upon the ground. It was a glorious morning—full of hope and exhilaration, and golden with promise.

On entering the grounds at an early hour, the first objects that met the eye were the members of Eagle Engine Co., No. 1, dressed in uniform, and on duty as police. At 9 o'clock, the first horse entered the gateway, and from this hour until after ten there was a continued string of arrivals. Some of the horses were clad in fancy blankets, with their names thereon. The horses coming in to take their position on the central grounds, where they were soon surrounded by a crowd of admirers. Favorite stallions were playing here and there, each to his little coterie of friends. "Mary Taylor" was there, looking as gaily as she of the Bowery. "Cassius M. Clay" was surrounded by his political friends. Young "Black Hawk" was there, but without the slightest appetite for chickens; "Flying Morgan," but without his wings; "Canadian Leopard," but without his claws, and altogether more Jenny Linds than Otto Goldschmidt could provide for, were he as industrious as his wife says he is. Thus they all poured in and thus assembled, and, meanwhile, spectators arrived in considerable numbers.

The Managers and Committees had assembled at the judges' stand, and congratulations were heard on every hand. All were delighted, and smart things, funny things, and good things generally were said. One gentleman of a dignified turn of mind thought the horses had a neighborly way of saluting each other. Another, who had been delighted with the music of the Springfield Brass Band, thought if they would play a dancing tune, there were several horses that would be happy to "dance a gig." Another, who happened to be given to vivid illustrations, looked upon the clean thorough-bred Virginia race horse, and testified his poor appreciation of her by saying that she "looked like an angle worm on legs."

By the side of the Judges' Stand, a large bell was placed, and at 10 o'clock this bell was struck. Immediately, GEORGE DWIGHT, Chief Marshal, and his assistants, paraded in front of the Judges' Stand. The Chief, Marshal, as the President of the Board of Managers, then addressed MARSHALL P. WILDER, President of the United States Agricultural Society, who stood uncovered upon the stand, and announced the opening of the exhibition. He alluded to the circumstances—the toils, and trials, and anxieties—that had attended the inception and growth of the enterprise, and testified his pleasure and gratification at the happy consummation. Mr. WILDER replied with brief and appropriate remarks, congratulating the Managers and Committee on the auspicious opening of the exhibition, and the admirable arrangements that had been made for it. At the close of his address, three cheers were called for, and they rang merrily in the morning air.

The horses were then called for to take their places upon the track, for the grand entree and parade,

embracing all the horses, nearly or quite 400 in number. They were called on by the Marshal in the following order:—

1. Stallions of 7 years old and over.
2. Stallions from 4 to 7 years old.
3. Thorough-bred Horses.
4. All Stallions of 4 years old and under.
5. Matched Horses.
6. Fancy Horses.
7. Geldings.
8. Breeding mares.
9. Breeding mares with foal at their side.
10. Ponies.
11. All horses entered for exhibition or sale.
12. Farm or team horses.

When all had taken their places upon the track, and word was given to start, Mr. Wilder called upon the assembly to give THREE CHEERS FOR THE FIRST NATIONAL HORSE EXHIBITION IN THE WORLD, and they were given with a will. And now was exhibited to the eye the most beautiful and animating scene, we venture to say, ever witnessed in this country. The horses stretched around the entire half mile circuit, numbering two and three abreast for the whole distance. Some of the horses were attached to skeleton buggies; others to phantom gigs, others to phaetons and "what nots," of every variety of build and color. The air was vocal with the neighing of the splendid animals, who entered into the spirit of the occasion with as hearty a zest as their owners. And now the scene grew more gay. The fast ones let out a link or two, and went as rapidly as it was safe to do, considering the crowded condition of the track. Gigs went dancing by, and fancy horses went their own graceful gait. One of the first objects that caught the eye upon the track was a phaeton drawn by four splendid Morgan horses, harnessed with a lavish magnificence of style never before seen in these parts. The establishment belonged to F. T. Cordis of Longmeadow, and elicited universal praise and admiration.

In the grand collection there were upwards of seventy-five stallions, principally representations of the Morgan and Black Hawk breeds. Among this large number of noble animals, it is always impossible to individualize. There was the favorite horse Cassius M. Clay, and his mother who had several other likely sons present: "Bob Logie," an English thorough bred, "Oscar," all the way from Michigan—a Kentucky horse; the American Eagle, from Flushing, N. Y.—a beautiful bay stallion, and "Clyde Briton," a noble stallion from Canada, weighing 1,600 pounds—and others of equal excellence attracted their well deserved share of attention.

After all had passed twice around the track, more than half of the horses suddenly pulled off upon the grounds, and ran races "across lots." This was the most beautiful scene of the day. Franconi's Hippodrome is no more to be compared with it than the Spunkville Artillery with a rattling, rolling thunder storm. The dumb show of the Crystal Palace, brilliant and valuable as it may be, would stand no chance by the side of such a show of high, active, and rejoicing life. All enjoyed it to the very quick of appreciation. Standing upon the elevated seats, and taking in the whole scene at one view—the throng upon the grounds, the darting, whirling, rattling carriages, and the fast horses going around the track at their full gait—one might well exclaim, as hundreds did enthusiastically exclaim, that it exceeded in life and beauty all the lively and beautiful

scenes within their memory. And when it was remembered that on the grounds were the equine representatives of twenty of the United States, as well as the Canadas, the exhibition appealed to the mind in its true beauty and magnitude.

At 12 o'clock, the bell announced that the hour for the examination and trial of DRAFT HORSES had arrived. In this department, the following was the

Board of Judges.—Rev. Mr. SEWALL, of Boston, HENRY FULLER, JR., of Springfield, THOMAS HANCOCK, of Burlington, New Jersey, HENRY A. DYER, of Brooklyn, Ct., and GEORGE P. DELAPLAIN, of Madison, Wisconsin.

The exhibition in this department was small—and most inexcessably small, for the Connecticut Valley alone has abundance of specimens that would show well in any part of the world. There were only 4 double teams entered, and 1 single horse.

The trial of these horses took place on the northern part of the grounds, upon a wagon, weighing 1,700 pounds, and loaded with pig iron to the amount of a little more than 5,100 pounds. Mr. Trask's horses led off, taking the load along with ease, and working very steadily. After going twice around the prescribed track, they were unharnessed, and Mr. Chapin's team took the load, doing their work very cleanly. George Ensworth tried the load with a pair of his horses, which had not been regularly entered. Then came Mr. Fonda's beautiful bay four year old colts. Some of the iron was taken off, for the first time round, reducing the amount to about 3,700 pounds. They took this easily, and the second time took the whole load. There was something a little too "foxy" about the movement of the animals for draft horses, but they demonstrated themselves to be a noble pair of colts. Young Quebec had no advantages for giving a fair test of his strength. The single wagon was too light for a heavy load, and the horse was in a light breast harness. However, nearly 3,000 pounds were put upon the wagon, with which the powerful fellow moved with ease, and in our opinion, in anything like really favorable circumstances, *could* have taken the whole pile along. Nearly two hours were spent in these trials, and, in the meantime, the crowd had gone home to dinner, and were beginning to congregate for the exhibitions of the afternoon.

Next followed the exhibition of Breeding Mares, that of Matched Horses, Colts, Stallions of 3 years, Fillies of 3 years, Stallions of 2 years, Fillies of 2 years, Stallions of 1 year, fancy matched Horses and Stallions of 4 to 7 years, Geldings, display of Ponies, and finally thorough breeds and Stallions of 7 years old and upwards. These were all brought out in their regular order at the sound of a bell, and at an hour previously arranged in the programme, for the inspection of the judges.

Some discussion took place as to what should constitute a pony. WM. S. KING, of Boston, gave his opinion that the class should embrace animals 14 hands high and under. Dr. E. HOLMES, of Maine, differed, and thought that 13 hands and under should constitute the stand. A long and interesting discussion followed in which several gentlemen took part. It was alleged that the precedent to be established was an important one. The Exhibition was designed to encourage the breeding of such horses as it is desirable to raise for use, and the use of the pony was for training children to ride. SOLON ROBINSON,

the famous "Hot Corn" writer of the New York Tribune, then rose, and gave a lucid account of the pony breed in this country, and showed himself well versed in their history and peculiarities. He stated that there was only one distinct and pure breed of ponies in this country, and these were the Marsh Ponies of South Carolina. These are under 13 hands high. The Canadian horses, known as ponies, are a mixture of the Indian horses with French blood. Mr. Robinson enlarged upon the importance of establishing a just precedent, and, at the close of his remarks, the President appointed a Committee to take the subject into consideration, and report. This Committee consisted of the following gentlemen:—Solon Robinson, of New York, George M. Atwater, of Springfield, Dr. E. Holmes, of Maine, Mr. Hamill, of Philadelphia, and W. S. King, of Boston.

This Committee subsequently reported, through their chairman, Mr. Robinson, and the report was accepted. It is as follows:

"The Committee finally determine, and recommend to the National Agricultural Society to publish as their opinion, that no animal of the horse family should be termed a pony which does not bear the distinctive marks of that breed,—that is, a heavy body, short head and legs, stout neck, with heavy mane and tail, and not over 14 hands high; and that in all offers of premiums for this breed of horses, pure pony blood should be taken into account, more than size and height, and such crosses of that breed with those of large growth as come the nearest to the original idea of a pony, for which the Shetland should be kept in view as the type of the race. Those not possessed of the distinctive pony marks, whatever their size, should be ranked as small horses, and not ponies."

PREMIUMS AWARDED AT THE FIRST NATIONAL EXHIBITION OF HORSES, AT SPRINGFIELD, MASS., OCTOBER, 1853.

FANCY MATCHED HORSES.

1st premium of \$100 to D. Sanderson, Somerville, N. J., No 14.

2d premium of \$50 to Doty & Hubbard, Montpelier, Vt., No 7.

3d premium of \$25 to Francis T. Cordis of Longmeadow, Mass., No 6.

1st gratuity of \$25 to James Reed of Palmer, Mass., No 1.

2d gratuity of \$20 to Josiah Crosby of North Andover, Mass., No 2.

Diploma to J. Wilcox 2d of Meriden, Ct., No 16.

MATCHED HORSES.

1st premium of \$100 to Lewis Gale of Barre, Vt., No 30.

2d premium of \$50 to L. B. Chapman of Windsor Locks, Ct., No 9.

3d premium of \$25 to M. H. Griffin of Middletown, Ct., for his New Jersey bred horses, No 3.

4th premium of \$20 to S. C. Hall of Manchester, N. H., No 6.

5th (extra) premium of \$10 to T. J. Shepard of Springfield, Mass., for his Genesee county horses, No 19.

Diplomas to L. A. Phillips of Providence, R. I., No 7, Nathan Bassett of Chatham Four Corners, N. Y., No 16, J. H. Tuttle of Conn., No 29, H. H. Parsons of Amherst, Mass., David P. Foot of Conn., No 14, Genery Twitchell of Boston, No 8.

FARM OR DRAUGHT HORSES.

Pairs of Horses.—1st premium of \$50 to C. Fonda

of Clifton Park, N. Y., No 4.

2d premium of \$25 to H. J. Chapin, of Springfield, No 1.

3d premium of \$20 to E. Trask of Springfield, No 2.

Diploma to George W. Goodrich, Pittsfield.

Single Horses.—1st premium of \$25 (not awarded).

2d premium of \$20 to E. & E. A. Rice of West Meriden, Ct., the only entry.

STALLIONS OF SEVEN YEARS AND OLDER.

1st premium of \$200 to "Cassius M. Clay," owned by J. H. Godwin of New York. No 20.

2d premium of \$100 to Morrill horse owned by F. Morrill of Danville, Vt., No 44.

3d premium of \$50 to "Bush Messenger," owned by Hiram Reed of Augusta, Me., No 5.

4th premium of \$25 to "Black Morgan," owned by Francis Twichell, Jr., of Petersham, Mass.

Gratuities of \$10 each were awarded as follows:—

To "Ashuelot Morgan," owned by Taft & Bowen of Richmond, N. H.; "Rattler," owned by James Bigart of Kingsbury, N. Y.; "John Anderson," owned by C. P. Currie of New York; "Oscar," owned by William M. Olcott of Michigan; "Deerfield Morgan," owned by F. A. Wier of Walpole, N. H.; "Lone Star," owned by H. Ball of New York; "Chesterfield Morgan," owned by E. B. Cavender of Keene, N. H.; "Bay Kentucky Hunter," owned by H. A. Longley of Belchertown; "Bay State Morgan," owned by John Chapin of Greenfield; "Flying Morgan," owned by R. M. Adams of Burlington, Vt.

STALLIONS OF 4 TO 7 YEARS.

1st premium of \$100 to "Paul Clifford," owned by Hunsdon & Wilcox, Vt., No 16.

2d premium of \$50 to "Flying Morgan," owned by John Chamberlain and Hiram Gibbs of Massachusetts, No 22.

3d premium of \$25 to "Young Black Hawk," owned by F. Halsely of Austerlitz, N. Y., No 18.

A gratuity of \$15 to "Flying Cloud," owned by Timothy T. Jackson of Flushing, L. I., No 17.

A gratuity of \$10 to "Canadian Leopard," owned by Ira Griffin of Massachusetts, No 5.

A gratuity of \$10 to "Raven," owned by Robbins Battell of Norfolk, Ct., No 1.

Diplomas to "North Star," owned by O. Richards Cummington, Mass.; "Flying Cloud," owned by T. T. Jackson, Jamaica, L. I.; "Raven," by R. Battell, Norfolk, Ct.; "Cub," by A. Lyman, West Randolph, Vt.; "Black Hawk," by C. P. Currie, N. Y.; "Young Eclipse," by A. Putnam, Holden, Mass.; "Black Hawk, Jr.," by R. S. Pond, Addison, Vt.

BREEDING MARES.

1st premium of \$100 to Charles W. Sherman of Vergennes, Vt., No 17.

2d premium of \$50 to I. F. DeWolf of Bristol, R. I., No 18.

3d premium of \$25 to George A. Kibbe of Springfield, No 24.

4th premium of \$20 to Amos Felch of Limerick, Me., No 28.

Diplomas were awarded to Otis Learned, of Oxford, Me., No 43; Francis Wilson of Hinesburgh, Vt., No 14; William Beardsley of Albany, No 40; Orrin Trow of Hardwick, Mass., No 35; Stillman French of Keene, N. H., No 15; Henry Alexander, Jr., of Springfield, No 8; Phillip Bacon of Simsbury, Ct., No 32; George M. Atwater of Springfield, No 1; Benj. Pease of Warehouse-Point, Ct., No 2; F. Stiles, Jr., of Clappville, Mass., No 10.

BREEDING MARES WITH FOAL BY THEIR SIDE.

1st premium of \$100 to R. S. Denney of Clappville, Mass., No 2.

2d premium of \$50 to Judson Nichols of Flushing, N. Y., No 5.

3d premium of \$20 to Robert Pomeroy of Pittsfield, Mass., No 9.

Diplomas were awarded to George Swetland of Springfield, Mass., No 6; B. W. Hamilton of West Hartford, Ct., No 7; Robert Tucker of Ware, No 4.

GELDINGS,—4 YEARS AND OVER.

1st premium of \$100 to Ebenezer Flagg of Worcester, No 7.

2d premium of \$50 to A. F. Smith of New England Village, Mass., No 86.

3d premium of \$25 to Francis Twichell, Jr., of Petersham, Mass., No 24.

4th premium of \$20 to George R. Wesson of Worcester.

Diplomas to G. A. Bates of Worcester, Henry Adams of Lowell, Mass., Jer. Sheldon, Jr., of Burrellville, R. I., S. H. Dumas of Concord, N. H., William Beardsley of Albany, N. Y., George Thompson of Boston, John Goodrich of Springfield, Wm. P. Paff of Albany, Warren Clifford of Worcester, J. B. Cristy of Boston, Charles Robinson of Fishkill Plains, N. Y., W. K. Green of Amsterdam, N. Y., George Lovejoy of Lowell, Mass.

COLTS.

Stallions of three years old.—1st premium of \$50 to John R. Briggs of Cheshire, Mass., No 1.

2d premium of \$25 to Levi Coe of Middletown, Ct., No 8.

3d premium of \$20 to Barnes Davis of Vernon, N. Y., No 11.

A discretionary premium to Edson A. Burchard, Shorham, Vt., No 5. [Animal very superior, but prevented by kick of another horse after arriving here from appearing on the ground.]

A diploma was awarded to E. C. Brooks, Lawrence, N. H., No 9, and to George Bowen, Worcester, Mass., No 3. Also a discretionary premium to E. C. Brooks, if thought best.

For best Filly, the premium of \$25 to Edmund Bush of Sheffield, Mass., No 2.

Stallions of two years old.—1st premium of \$25 to Isaac Crispell of Hurley, N. Y., No 5.

2d premium of \$20 to Mala Cowles of Belchertown, Mass., No 2.

A diploma to Solomon West, East Brookfield, Mass., No 6. Also to George A. Hunn of Hartford, Ct., for 2 year old gelding.

A diploma for *best Filly* of 2 years to John H. Coffing, Great Barrington, Mass., No 1. The premium best filly of 2 years was not awarded, there being only this single entry.

Stallions of one year.—1st premium of \$25 to Capt. W. A. Newman, U. S. A. Vergennes, Vt., No 5.

2d premium of \$20 to R. M. Adams, Burlington, Vt., No 3.

Diploma to Nelson Richards of Pantown, Vt., No 4.

PAIRS OF PONIES.

1st premium of \$50 to J. L. Briggs of Springfield, Mass., No 1.

2d premium of \$25 to Warren Daniels of Bellows Falls, Vt., No 3.

3d premium of \$20 to John Moulton of Framingham, Mass., No 13.

Diplomas were awarded to William Jay, Jr., of

New York, No 4, and L. V. H. Crosby of Springfield, Mass., No 6.

SINGLE PONIES.

1st premium of \$25 to P. T. Kirby of Half Moon, N. Y., No 15.

2d premium of \$20 to James Bird of Hartford, Ct., No 9.

Diplomas were awarded to James Reed of Palmer, Mass., No 11, Daniel P. Riley of Salem, Mass., No 5, P. P. Brown of Palmer, Mass., No 14, and U. Bowen of Richmond, N. H., No 12.

THOROUGH-BRED HORSES.

Stallions.—1st and only premium of \$100 to "Bob Logic," owned by J. R. Hutchins of Montreal, Canada, No 4.

Brood Mares.—1st premium of \$100 to "Lady Digby," owned by James Turner of Boston, No 5.

2d premium of \$50 to "Lady Sussex," owned by Dr. J. G. Bunting, Lewis co., N. Y., No 7.

3d premium of \$25 to "Jenny Lind," owned by A. L. Bingham of West Cornwall, Vt., No 6.

The grand Agricultural Banquet came off on the third day. Plates were laid for 1,773 guests. Marshall P. Wilder, the president of the day, assumed the chair, supported on either side by Abbott Lawrence and ex-Gov. Seymour. From the many excellent speeches made, that of C. P. Holcomb, of Delaware, embraces the most practical information. On rising and being heartily cheered, he said:

They had sometimes heard of calling "spirits from the vasty deep," but they did not always come when called for; and perhaps it would be the better for him to decline responding to the call they had made, after the eloquent words to which they had listened. He had heard the remarks of the various gentlemen with great interest and pleasure, and especially those of our late Minister to England (Mr. Lawrence) when he thanked the citizens of Springfield in the name of Massachusetts and in the name of the Union, for this great exhibition. He had no doubt that that was the honest expression of his feeling. It was an occasion of congratulation to the country at large. But, perhaps, as full praise had been given to the citizens of Springfield, and to the value of the stock exhibited there, they would pardon him while, as a practical farmer, he made a few practical suggestions.

He had gone, as the President observed, the past summer, to England, and a part of his object in going there was to select a horse, and he travelled a great ways, in different parts of the kingdom, for the purpose of ascertaining their condition. He had ample facilities for his object, having an introduction from Mr. Tattersall, which enabled him to visit several of the most celebrated studs there. The result was, that he came away without purchasing a horse at all. He wished to tell his brother farmers what the course of breeding was in England, and to show the result upon the stock, that no American Farmer need go further in the same direction. They were aware that when the English breeders united the blood of the Barb with the Turk and the Arab, no better horses were to be found in the world. They would then run four miles and repeat in 1 40 and 1 24. Now, instead of running four miles and repeating; they only ran two and three, and did not repeat at all. It was a single dash of two, two and a half, and, at the Derby, of three miles, and that was all. He had told eminent breeders there, that

the horses in this country ran four miles and repeated—repeating, sometimes, two or three times. They did not doubt the fact. They said that they had formerly such breeds there, but it was not so now. In corroboration of his statements, Mr. H. mentioned that, in a conversation he recently had with his friend from Virginia, (Mr. Botts,) he assured him that some horses of the Boston blood ran, the other day, at Richmond, four miles in 7.46, 7.46½ and 7.49. They would see in what remarkable time time the last heat was run—about three seconds longer than the first. They had not got any horses like these in England, they would be very proud of them if they had.

Why was this degeneracy? In the first place, he was very much surprised, on visiting England to find that horse-racing, if it was not the business of the nation, was a very great amusement. In every city, town and village, they had betting-houses, where all the members of the community, the serving maid as well as the nobleman, entered their bets through the whole year, to be decided when the races came off. So great had this evil become, that a bill was passed, at the last session of Parliament, designed to put these betting-houses down. Now, the result of this was, that every attention was paid to getting *heels*. He had stood by the side of two years old colts, fifteen hands high, and he asked his friend, Mr. John Day, how it was possible to make up those colts in that way. Mr. Day told him that they were entered to run at two years old, three years old, and they were entered shortly after they were foaled, to run at a certain time. The dam was kept as high as possible, and in the paddock there was a little box, into which the colt could run, where oat meal was placed and oats were always before him. They were stuffed with all the oats they could be induced to eat. The consequence was, that it was quite impossible that they should have any bone. They ran at two, three, and four years old; but at all the races which he attended, he saw but one or two entered to run even at five years old, for by that time they were broken down.

He wished to say there,—since they had come together to speak out freely their opinions—what he thought. He believed that they needed to put two inches upon the height of their horses; and those two inches of height the breeders must give. They could do it. They would give them five years—ten, if they wished—but they must put their horses up two inches higher. Gentlemen might say that they were tall enough for some purposes; but what he wished to do was to supply the luxuries of the cities. The horse, with the citizen, was an article of luxury. They would pay almost any price, if the breeders would only get them up to the right height. "Now, gentlemen," said Mr. H., "get your Morgans and your Black Hawks up those two inches?" (Applause.)

There were two ways of doing this. One was to keep the dam in good condition; let her do no work. Then let the colt be pressed with oats, say until he was a year old. Up to that point, he conceived that there was no danger; but there they must stop. Another was by breeding larger horses upon this stock. There must be risk there, but he would try the plan. He would try the pressing system, for every farmer knew if he gave a calf a little corn, in addition to keeping the cow in good condition, the animal would grow better and faster than under other circumstances.

Mr. H. said he understood the value of Southern

blood; he believed there were no better horses in the world, and none faster. He would not have them undervalue this breed; it was such blood as they had not got in England.

He (Mr. H.) was a grower of wheat. He ploughed the ground with his horses; he sowed his wheat fields with his horses; he drilled in his wheat with his horses; he reaped and thrashed out his wheat with his horses. They were not only an article of necessity to the farmer, but they were every where an article of luxury. What they wanted, in the rural districts, was to improve the breed of their horses, that their sons and their daughters might ride at pleasure, as well as to make the animal more serviceable in the field. In conclusion, Mr. Holcomb said—I shall go away from this Convention very grateful for the exhibition. To a similar exhibition I shall certainly return; and to that, or to some other occasion, we must postpone the erection of an equestrian statue to **GEORGE M. ATWATER**, (Loud applause) and to a much later period—to a day, I trust, that the youngest in this assembly will scarcely see,—the erection of a monument to the memory of the man who was the friend of horticulture, terraculture and agriculture—the friend of rural life, in all its relations, **COL. MARSHALL P. WILDER**. [Great cheering.] I will conclude with the expression of a wish—a good wish. It is prompted by a recent visit to the grave of Robert Burns. I went down to Ayrshire, where the noble poet labored, like myself, in the harvest field and at the common drudgery of life, boasting that no man could beat him at the plough, and so he put absolute want at defiance. He apostrophizes the farmer in this way—let me quote the words of the poet, to whom I am brother:—

"O! Scotia! my dear, my native soil,
For whom to be aveng'd my warmest wish is sent,
Long may thy hardy sons of rustic toil
Be blest with health, and peace, and sweet content,
And, oh! may Heaven their precious lives defend
From luxury's contagion weak and vile;
Then howe'er crowns and coronets be rent
A virtuous populace will raise the while,
And stand a wall of fire about their much-loved Isle."

HON. ABBOTT LAWRENCE.—I thank you for according to me the privilege of proposing a sentiment here, which I am sure the whole audience will thank me for claiming, and to which they will respond without stint. Believing, as I do, that one individual has been a great public benefactor, and that his name should be recorded and transmitted to posterity, I have asked the privilege of giving a toast, and that toast is to the individual who has originated and promulgated the idea of this great National Horse Convention. Without occupying your time in making any extended remarks, I beg to offer to you—

Health, happiness and prosperity to **GEORGE M. ATWATER**. [Loud applause, followed by three hearty cheers.]

Mr. Atwater then mounted the stand amid enthusiastic plaudits, and said,—

Mr. President,—Cordial and enthusiastic have been the greetings of the tens of thousands of voices which have been heard on these grounds, since the first opening hours of this exhibition; and I trust and believe that the hearty response with which our efforts have been hailed, is but the expression of a sentiment which will live beyond the greetings of to-day, and find utterance on other plains and in exhibitions of lasting interest and utility. Allow me to say a word, sir, with reference to the desirableness and expediency of following up the precedent which has been established for the annual and sole exhibition of horses.

I feel, indeed, that argument on this point is now no longer necessary. The universal support and en-

couragement which have been extended to this enterprise, together with the unanimous approval of the press, are a guaranty that, henceforth, to the Horse will be accorded a position in some good degree proportioned to his excellencies and value. It is no apology for those to whom properly belongs the duty of breeding and rearing this animal for domestic uses, that the disposition of training him for the course, which has so long prevailed in England and in certain sections of our own country, has already resulted in developing many of his extraordinary powers. There are qualities constitutively belonging to him (I am satisfied from my own experience in his use) which remain to be developed.

You are aware, Mr. President, of the interest with which the horse was regarded by the people of Greece and Rome in the periods of their highest refinement and civilization; however modern and valueless the race of "fast men," we have abundant evidences that fast horses were the glory of the ancients. In referring to the records of their history, we also notice that there were three essentials which constituted eligibility to the honors of State: that the person should forsake his benedictine life, that he should build for himself a house, and that he should sustain the relation of parent; I think, sir, that they might, with equal propriety, have insisted, also, that the applicant for distinction should rear for himself and his successors at least one thorough bred horse.

The love of the "Arabs" for their horses, and their humanity to them, are well known. So highly have they esteemed them that their genealogy is traceable back for two thousand years. Those of their purest stock are reverentially denominated "nobles." One of this class, so renowned for strength and beauty, was imported into England by the talented divine, Bishop Heber, and so cordial was he in his esteem of the animal that the "Arab" became his familiar pet.

With us, the subject of raising thorough-breds has been so lightly esteemed, that I hesitate to refer to the number of this class of horses, which the catalogue of our exhibition presents. As an instance of the value of "thorough-breds," I will allude to the profits resulting from the ownership of that famous horse "Eclipse." His name, sir, which you know was given him "because he distanced all competitors, or, in other words, they had no place. Of his speed, no correct estimate can be formed, as he never met with an opponent sufficiently fleet to put it to the test." "Eclipse" produced three hundred and thirty winners, netting to his owners the sum of over one million of dollars. I have the opinion of the Hon. Mr. Holcomb, a distinguished member, Mr. President, of your "honorable body"—that the impetus which this exhibition will undoubtedly give to the breeding of superior stocks of horses may result, in the limited period of 5 to 10 years, in an increased profit to the farmer, of an amount equal to the present entire revenue of our government.

The horse, sir, is a type of the qualities which do honor to our efforts to exalt the standard of his excellence, not alone in beauty, but for adaptation to the imperative wants of man. The requisitions which we make upon him cannot be answered by any other animal in the wide creation.

Mr. President, I will not quote the distinguished and accomplished Lord Herbert of England, as an impartial admirer of this noble race, when he says that "a good rider, on a good horse, is as much above himself, and others, as this world can make him,"

but I think that the sentiment thus expressed, and the authorities given, will exonerate those who are in earnest in regard to this subject, from the imputation of being elevated upon the stilts of an exaggerated zeal.

The account in the Farmer concludes thus:—

The representation of the press at the banquet was very large, there being probably more than fifty editors and reporters present. There were more than thirty reporters together, on one line of tables.

The Railroads during the last week did a tremendously large business, and they have thus found their account in their liberality. It is calculated that not less than 30,000 strangers visited the city during the week.

It may interest some to know the exact number of entries as they appear on the Secretary's books, and we give them: Thorough-breds 7, Stallions 7 years and over 56, Stallions of 4 years and under 7 34, Geldings 136, Breeding Mares 53, Breeding Mares with foal at side 9, Matched Horses 33, Fancy ditto 16, Stallions and Fillies of 3 years 19, of 2 years 10, of 1 year 7, Farm and Draft Horses 6, Ponies 21. The total number of entries was 407, covering, as we reckon it, 472 animals.

In looking over the list of entries, we find that the Morgan and Black Hawk breeds prevailed in the exhibition to an extent far beyond what we supposed to be the fact. In many cases, the breeds are not distinctly stated—or present such mixtures as not to belong to a distinct family. Among the breeding mares, we find 22 Morgans, 8 Black Hawks, and 9 Messengers; among the Geldings; 31 Morgans, 11 Black Hawks, 9 Messengers, 4 Hambletonians, English and French 3 each. Among the stallions of all ages, there were 50 Morgans and 22 Black Hawks. It will thus be seen that the Morgans were very largely the leading family, while the Black Hawks were second on the list.

The gross receipts of the Exhibition were nearly \$10,000, and the sum received will be just about enough to pay expenses. The leading items of those expenses are, the premiums, amounting to about \$3,000, to which will probably be added many gratuities, over and above this sum, bestowed upon fine horses present from a distance; the erection of the high board fence around the lot and the building of the stalls and seats, which cost \$1200 or \$1500; printing and advertising; the banquet and the entertainment of invited guests. A large amount of minor expenses, many of which could not have been foreseen, and even now must be indefinitely estimated, were incurred. The Managers were liberal in their arrangements, in proportion as the certainty of success enabled them to be. The receipts for entrance fees for horses amounted to from \$1,600 to \$1,700, and between \$1,000 and \$1,200 were taken for tickets to the banquet. The balance of receipts is from entrance fees from spectators.

We thus close the history of one of the most interesting exhibitions on record. It is the history of a fine idea entirely realized. The exhibition was singularly exempt from accident, and from those riotous demonstrations so often attendant upon exciting public occasions. Professional rogues were attracted here, of course, and several persons suffered from depredations upon their pockets. But the beautiful horses, and the crowds of men and women, have come and gone; may a good influence have gone forth with them, which shall tell for good upon all their interests!

Super Phosphate of Lime.

We extract the following directions, how to make the above article, on the farm, from the "American Agriculturist." In many parts of the country, particularly in the interior near towns and villages, Bones can readily be collected which are now allowed to waste, and article made from them *at home*, much superior to some of the nostrums now advertised as fertilizers.

To make Super-Phosphate of Lime.—Some bones, some oil of vitriol, (sulphuric acid,) and some wood-hooped barrels, or half-barrels, or half-hogheads, are all the apparatus needed. Bones are everywhere to be found. Offer some of the idle boys in your neighborhood five to ten cents a bushel for hunting them up, and you will soon cry, enough for the present! Join two or three of your neighbors and send to the nearest large town, and get a few carboys of sulphuric acid. These carboys hold from 120 to 180 lbs., and by stipulating to return the carboys, you can generally get the acid for two to three cents a pound. For casks, take old musty meat barrels, or tight molasses hogheads, sawn in two in the middle. The half-barrels, or half-hogheads, are most convenient for use. For operations on a small scale one or two will be sufficient.

Put into the barrel a quantity of water, and pour in some acid. The acid should be added in small portions at a time, and the mixture be allowed to cool before more is added, as great heat is produced by mixing the acid and water. You want about two and a half quarts of water for one quart of acid; strict accuracy, however, is not necessary. Use a pitcher, or other earthen vessel, for measuring the acid and water. Having put the water and acid into the barrel, you may now put in as many bones as you can punch down into the liquid, which should first be crushed tolerably fine. As the bones settle from time to time put in more. Let this stand from six to twelve weeks, stirring it up well with a stick every two or three days if convenient, and you will have a liquid super-phosphate of lime as good as can be made. When you wish to apply it to the land, pour out the liquid, leaving the undissolved bones still in the barrel, and mix the liquid with some unleached ash; say two quarts of ashes to a gallon of the liquid; and then mix the whole thoroughly with a large quantity of dry muck, charcoal dust, well rotted dry manure, or even with any dry soil, and it is ready to be sown upon the field broadcast, or put in hills or drills with the seed. If put in direct contact with the seed, be sure to have it first well mixed with a large quantity of muck or other substance, say two or three gallons to a cartload. The mixing can be done with a shovel on a floor or even on the ground.

To make Improved Super-phosphate.—Make the super-phosphate just as above described, and instead of the ashes, or in addition to them, add a greater or less quantity of urine, or the liquid from the manure heap, and then dry with muck as before. The more urine or manure drainings you add, the more *improved*, or the richer in ammonia, will be your preparation.

The above process is very simple, though we have used a good many words in describing all the particulars; and with little trouble you can make fifty dollars worth of first-rate super-phosphate, or improved super-phosphate.

Caution.—In handling oil of vitriol, be careful to have none get upon your hands, face, or clothes. This

caution is especially necessary in pouring the acid from the carboy, and in dropping the bones into the barrel. It is well to always keep at hand a pail of water, and should any fly upon your person, or clothes immediately remove it by a free use of water. Should valuable garments be colored by the acid, the color can generally be removed, by at once washing the spot with some saleratus dissolved in water.

The above operation can be carried on in the open air quite as well as under cover, and by standing on the windward side of the tub any unpleasant fumes will be avoided. A board should be placed over the tub to keep out water during rain.

After pouring out the liquid super-phosphate from the barrel, you can add more water, acid, and bones, and let the process go on anew. The article is just as good, or even better, after it has stood one or five years. Should the hoops chance to burst off from your cask or barrel at any time, pour the liquid into another vessel, or set it upon the top of another, and let it through by punching out the bottom.

Guano in Delaware.

Profit of drilling wheat.

Extracted from George P. Fisher's report to the patent office.

There can be no doubt that even at the present extravagant prices of guano, the farmer who cultivates his own land, if that land is poor, is handsomely paid back his outlay for all his guano judiciously applied, and has a margin left for profit, besides the additional advantage of having his ground covered with a thick crop of grass, which will furnish him the basis of an improvement less evanescent than that made by the guano *per se*, whilst the landlord who furnishes his tenant with this manure is paying at the rate of \$1 per 100 pounds of guano, at least for this mere advantage of having his land in a condition for speedy improvement. The quickest mode of renovating our worn-out soil, we have found to be the following: Take a field, and dress with 300 pounds guano, turned very deep; then sow $1\frac{1}{2}$ bushel of wheat per acre, about the 10th of September; the wheat to be seeded with a drill. When the ground is thawed, in the latter part of February, or early in March, sow one sixth of a bushel of clover-seed per acre; it is best to sow this on a light fall of snow, so that the melting of the snow shall carry the seed with it into the cracks of the earth made by the escape of frost from the ground. If it should, by reason of high winds, become dry before the clover has had time to get up, it will be well to run a rake-harrow over the field. This will benefit both the wheat and the clover. If the season is not excessively dry, the clover will be thickly set. My experience last year on this point was as follows: I sowed, in the autumn of 1851, a field of 20 acres in wheat, one-half of which was drilled and the other broadcast. Five years before that the field was in corn; and so completely had the soil been exhausted that it only yielded 135 $\frac{1}{2}$ bushels of corn, or about 7 bushels per acre. I gave the land about 280 pounds of guano per acre, when flushed for the wheat, and turned it under, to the yellow dirt. The clover was sown on all the field at the same time in March. The half that was drilled yielded enough wheat more than the other half to repay the seed; and there is now more than twice the quantity of clover on the drilled half than there is on the other. It is to be hoped that the next territory we shall have annexed will be the Lobos or some other guano islands. They

would be worth more to the farmers of this country, who compose four-fifths of its population, than Cuba and all the rest of the Antilles besides. Or if annexation is not to be the future fashion, some honorable means should be used by our government to effect such a negotiation with Peru as will enable us to buy our guano at a reasonable price. I have no doubt, if it could be had by the consumer at \$40 or even \$35 per 2,240 pounds, the government of Peru would lose nothing by the reduction, whilst it would greatly benefit the agricultural portion of our community.

Premium Poultry.

Exhibition Fowls.—Before entering into descriptions of the various breeds now competing at the different shows in the United Kingdom, it may be well to name a few imperative rules applicable to them all. The competition is now so great that something more than mere merit is required to gain prizes, unless it be where they are valueless from the absence of those names in the list which are a guarantee for the quality of the beaten birds. They must be in excellent condition, not merely fat, but in full flesh, health, and spirits. It is necessary, in order that they may show to the greatest advantage—nothing is more important than this in fowls intended for exhibition—they should take the eye at first sight, and to do this, they must be in first-rate condition. This will not be accomplished by extra feeding for a fortnight, but by keeping them well from the time they are hatched, and this is more economical than the wretched and short sighted practice of alternate starving and over-feeding, because in the former case the fowls suffer no check, and grow and furnish accordingly. Fowls intended for competition in December should be selected from March or April chickens, and the cocks and pullets kept separate till a short time before the show, when they should run together, that they may agree when in confinement. Inattention to this latter particular is the cause of the scalped pullets so common in pens, and these not of game fowls, but of all breeds, even the least pugnacious. They will not always agree unless they are used to be together, and as the unfortunate pullet cannot escape, she is often killed, and a pen spoiled. Those who know the difficulty of getting three good pullets of equal merit to form a pen, will readily admit that such a circumstance often spoils a season, and is the cause of empty pens. Uniformity comes next in importance, and this also is an essential. I would advise every exhibitor to pen his fowls at home before he sends them away, and to judge them many times himself. We are all a little disposed to admire our own property—but judges (and every exhibitor should be one) look first for beauties and then for defects. Many of the latter are imperceptible while fowls are running at liberty, but they are prominent when they are in a small pen. They should match in size, colour, age; and even carriage. Competition is often very close, and if judges have to give perhaps two prizes to a class numbering 150 entries, it will easily be understood that any little incongruity, unimportant at another time, is fatal to a pen so far as honors are concerned. There are breeds, of which we shall write hereafter, where colour is not a first point, and yet if two competing pens were equal in every other respect, if one were more uniform than the other, that pen would carry the prize. No one who has never judged, can understand the importance of these apparent trifles, or the relief it affords to judges to discover them, when,

as is often the case, an hour has been spent over five or six pens selected from 100.

They should be in perfect plumage. To insure this they should be properly packed, and my experience is in favour of a round basket—it has many advantages—if offers no corner where fowls can huddle up and trample each other, and as the fowls in moving go round, the feathers, especially the tails of the cocks, follow and are not broken. The baskets should allow the fowls to stand upright, and should be covered with canvas. Plenty of clean Oat or Barley straw should be put at the bottom, and the birds should not be packed till it is absolutely necessary. They should not for economy's sake in carriage be packed too close, or too many in a basket. The best test of the proper size is to choose one which will allow all its occupants to sit down at the same time. Whatever breed is exhibited, the owner should always send his best, for it is tiresome to hear people say when defeated, they could have sent better birds, and it is always a sorry sight when fowls of undoubted merit lose even a commendatory notice for want of condition, or from ragged plumage caused by bad catching. As a rule, a person unaccustomed to handle fowls should take them by the legs, raising the bird from the ground the moment they hold it, otherwise injury is done in struggling, and by beating the wings and breast against the ground. *John Bailey.*
English Agricultural Gazette.

The Patent Office.

The Patent Office report, which is annually published, is one of the most interesting public documents which the Government puts forth. It shows the progress of invention in this country, and the remarkably practical character of mind which distinguishes our countrymen. There is nothing which promises a saving of manual labor, no matter in what department of domestic industry, or which may accomplish work in an improved manner, which is too insignificant for the application of inventive genius. Many of these inventions are, no doubt, more curious than profitable; but many of them yield the inventor a fortune. Thus in the patent report for 1852, a man who had made a slight improvement in a straw-cutter, took a model of his machine through the Western States, and after a tour of eight months returned with \$40,000. Another had a machine to thresh and clean grain, which, in fifteen months, he sold for \$90,000. A third obtained a patent for a printer's ink, refused \$50,000 for it, and finally sold it for \$60,000. Examiner Lane's report describes various new electrical inventions:

Among these is an electric whaling apparatus, by which the whale is literally "shocked to death." Another is an electro-magnetic alarm, which rings bells and displays signals in case of fire or burglars. Another is an electric clock, which wakes you up, tells you what time it is, and lights a lamp for you at any hour you please.

There is a "sound gatherer," a sort of huge ear trumpet, to be placed in front of a locomotive, bringing to the engineer's ear all the noises ahead, perfectly distinct, notwithstanding the rattle of the train. There is an invention that picks up pins from a confused heap, turns them all around with their heads up, and sticks them in papers, in regular rows. Another goes through the whole process of cigar making, taking in tobacco leaves and turning out the perfect article. One machine cuts cheese; another scours knives and forks; another blacks boots; another rocks the cradle; and seven or eight take in

washing and ironing. There is a parlor chair patented, that cannot be tipped back on two legs, and a railway chair that can be tipped back into any position, without any legs at all. Another patent is for a machine that counts the passengers in an omnibus and takes their fares. When a very fat man gets in it counts two, and charges double. There is a variety of guns patented that load themselves; a fish line that adjusts its own bait; and a rat trap that throws away the rat, and then baits and sets itself, and stands in the corner for another.

There is a machine also by which a man prints, instead of writing his thoughts. It is played on like a piano. And speaking of pianos, it is estimated that nine thousand are made every year in the United States, giving constant employment to one thousand nine hundred hands, and costing over two millions of dollars. There is also an explanation of the principles of the celebrated Hobb's lock. "Its unpickability" depends upon a secondary or false set of tumblers, which prevent the instruments used in picking from reaching the real ones. Moreover, the lock is powder proof, and may be loaded through the keyhole and fired off until the burglar is tired of his fruitless work, or fears that the report of his explosions will bring to view his experiments more witnesses than he desires. Doors and shutters have also been patented, that cannot be broken through with either pick or sledge-hammer. The burglar's occupation's gone. A harpoon is described which makes the whale kill himself. The more he pulls the line, the deeper goes the harpoon. An ice making machine has been patented, which goes by a steam engine. In an experimental trial it froze several bottles of sherry, and produced blocks of ice of the size of a cubic foot, when the thermometer was standing at 80 degrees. It is calculated that for every ton of coal put into the furnace it will make a ton of ice.

There are no less than twenty-seven patents granted during the year for steam and gas inventions. An improvement is also mentioned in cutting-nails, so as to possess the compound quality of wrought and cut nails. Also, in making copper kettles, by which the kettle is formed by the pressure of a burnisher, as the disc is revolved in a lathe. Out of 493 applications examined, 165 were granted, which shows that nearly three-fourths the labor bestowed in invention is unprofitably employed, probably for want of information relative to machines already patented. Many an inventor spends his hours contriving a mechanical improvement, only to find, when he has succeeded, that some other inventor has forestalled him, and patented the same invention.

FINE CATTLE.—Our friend, WILLIAM VANSANT, Esq., of Montgomery Square, this county, recently disposed of two cows for the sum of \$220.00. They were, we understand, of the full blooded Devon breed. One of them was sold at the Montgomery county Agricultural Exhibition, and the other at the Rising Sun Exhibition. A young heifer of the same breed, was sold by him for \$50. Another cow; "Young Mary," and a Bull "Sir Edward," of the same breed, each took premiums at the Montgomery and Philadelphia Exhibitions. The latter was also awarded the premium of fifteen dollars at the Baltimore County (Md.) Exhibition. Mr. Vansant exhibits a spirit of enterprise in the improvement of stock, worthy of imitation. His display of "Shanghais" at the Montgomery County Agricultural Exhibition was very fine, and commanded a large show of attention as well as admiration from those who were present — *Montgomery Watchman.*

Digging Machines.

New Implement.—A spirited discussion on the merits of agricultural implements is one of the results of free trade in grain. In former days the plough and the harrow were the capital stock of many farmers. The drill, the horse-doe, the scarifier, and the cultivator are of more recent times. It would appear now that the plough is to be superseded by a digging machine. I am one of those who think we plough too much, and that the plough will give place occasionally to implements of more general utility; but that it will be superseded is out of the question. All implements employed in agriculture should have these requisites; they should be simple in structure, strong enough for all descriptions of soil, and be applicable to general cultivation. The plough has these requisites, but the slow progress it makes does not keep pace with the spirit of the age; it must and will therefore partly give place to implements that will perform a greater breadth of work in a given time. All implements that till the ground may be termed cultivators; but as yet there are few of this class that are really efficacious, and of general use. I noticed at work last week an implement of the cultivator order, which, from the simplicity of its structure, and its great power, led me to examine it; it consisted of three open iron beams in parallel lines, with cross beams at either end. At the tail end of each beam is fixed a strong tine or share, much in form like the tines of the Ducie cultivator, fastened by double bolts, with a screw to adjust the depth of working. In the front are fixed three small wheels on the three beams, and from the tines are three draught rods pointing in the direction of the horses' collars, bringing the draught power direct from the tines. The field in which the implement was at work was a lean stubble of the strongest clay, wellmatted with Couch Grass, 10 acres in extent, and formed two sides of a deepish valley, and the work was made up and down the hill, with eight horses. The tines buried themselves in the ground about 7 inches, and tore up the retentive soil in a most masterly manner, and scattered or rather shivered the pieces in most admired confusion, leaving the field in a fit state to be operated upon by a lighter implement going across the work. The quantity of work done in the day was five acres, and consequently the 10 acre piece, which would have required ten ploughs with four horses each for one day, was completed with eight horses and one implement in two days—a saving in labor to the amount of 24 horses in one field; and what is of more importance, the great advantage to the land in being moved in dry weather. On inquiry I learnt that the implement was modeled and manufactured by Mr. W. Smith, of Little Woolston, near Newport Pagnel, who is a proprietor and practical farmer and that he has taken out a patent for it. Now, whether this implement is perfect or not, time will show; but I am quite satisfied that to gain sufficient power to work our strong clay soils, the implement must work under the surface and not over it. It seems to me quite impossible that sufficient power can be had, even by the aid of steam, to till the ground by rotatory means, and I fear the enterprise and ingenuity and zeal of our friend Mr. Mechi will fail to accomplish the laudable object he has in view, and also that the digging machines will shortly slumber amongst the many speculative implements which may be seen resting from their labors in the shelter hovels of our most enterprising agriculturists.

English Agricultural Gazette.

National Agriculture.

The total value of the annual products of the soil of the United States is now about One Thousand Millions of Dollars; and no one who knows what Science has done for Agriculture will doubt that the same amount of Labor which is now employed in producing this aggregate might be so applied as to secure a total product thirty per cent. greater, or One Thousand Three Hundred Millions. But scientific, skillful, thorough Agriculture always employs more than the shiftless, slouching sort too generally prevalent; and it is certainly within bounds to estimate that our Agriculture might be so improved as, by the help of additional labor now unemployed and unproductive, to give an additional product of fifty per cent., or Five Hundred Millions per annum—an achievement which would double the wealth of the country every eight or ten years. Whosoever will carefully review the Agriculture of a single State, or even an average County, in any part of the Union, and estimate how much its product might be enhanced by Irrigation, Manuring, Deep Plowing, Draining, &c., will perceive that our calculation is far within the truth.

But suppose that only half of it, or an addition of Two Hundred and Fifty Millions per annum to our annual Agricultural product, is attainable, what an immense addition to our national wealth would thereby be insured! Four-fifths of this would probably be permanently added to the wealth of the country—that is, the farmer whose annual product should be swelled from \$1,000 to \$1,250, or from \$2,000 to \$2,500, and would not eat or drink the surplus, but would invest the greater part of it in new buildings, fences, barns, implements, furniture &c., &c., giving profitable employment to mechanics and laborers and largely increasing the business of merchants and the income of professional men. Such an addition to the annual product of our Agriculture would increase the consumption of Manufactures, domestic and imported, in far greater ratio, since from the annual product of every farm the food of those making a living on it must first be taken for home use, affording no business or profit to any one else, leaving only the surplus to form the staple of trade; and an addition of twenty five per cent. to the annual product of each farm would probably double the annual exchanges and general trade of the country.—*N. Y. Tribune.*

Improve Spare Minutes.

To be really and practically industrious, one must improve those minute particles of time, known as "spare minutes." Of all portions of our life, these spare minutes are the most fruitful for good or evil, and are literally the gaps through which temptation finds access to the soul. Spare minutes are gold dust of time, said Young; sands make the mountains; moments make the year! Idleness wastes a man as insensibly as industry improves him: evil deeds and evil thoughts never creep upon him who is assiduously employed upon good ones. The mind and body both require activity to keep them pure and healthy in action. Like water, if it runneth free, it is pure and wholesome; but what is there more noisome and pestilential than a stagnant pool? Diligence of itself alone is a fair fortune, and industry is a good estate to have and to hold.

The better animals can be fed, and the more comfortable they can be kept, the more profitable they are—and all farmers work for profit.

Pedigree of Thorough Bred Durham Cow, Juno 3d, owned by Gerard Cope, near West Chester, Chester county, Pa.

Juno the 3d, red with some white, got by Louis Phillippe, dam, Juno the 2d, by the imported Bull, "His Grace," grand dam, "Juno the 1st," begotten in England by "Charley," great grand dam, "Red Rose," (imported by Paschall Morris,) by young Magnum Bonum," gr. gr. g. d. by "Barmpton," gr. gr. gr. g. d. by "Northumberland," a son of "Comet."

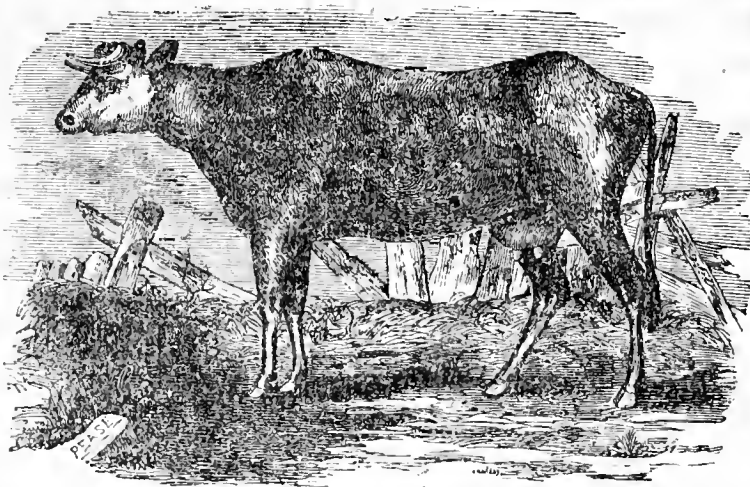
"Louis Phillippe" was got by "Henry Clay," dam, the imported cow, "Bessy," who made over 15 lbs. of butter in a single week. Juno the 3d took the first premium for the best thorough bred Durham Cow, at the recent show of the Chester County Agricultural Society. She is extremely neat and fine in the bone, and there is a quality and style in her appearance, independent of her having most of the characteristic points of a Durham, which would strike an observer at the first glance. Her brisket is deep and projecting, the loin and hips wide and with a fine back, forming a pretty strait line from the neck to the setting on of the tail. Juno the 3d has also the important point of being a good handler. Being one of a dairy of 23 cows, she has never been tried separately to test her exact capacity for milk and butter, but would be called more of a butter cow than remarkable for the quantity of milk, which is, however,

unusually rich. This was the case with her dam, grand dam and great grand dam, "Red Rose," and also with "Bessy," the dam of "Louis Phillippe." We recollect being present when butter was made from Bessy's cream in sixty seconds, by stirring it in a tea cup with a spoon, and also saw the cream taken off from her pan of milk in a single piece by lapping over with the skimmer.

Gerard Cope's dairy may be cited as a sample of what the Durhams will do for dairy purposes. They are nearly all of his own raising, and by taking care to select good milkers in the first place, and then breeding them to bulls, whose dams have also been remarkable for deep milking, he has obtained, a dairy of 23 cows, not often equalled, for size and quality combined with a large yield of butter. Ten of them on trial for several weeks successively made 100 lbs. per week.

Calves and heifers from these cows, have been sold at high prices and distributed to distant parts of the country. They are chiefly of the red and dark colors.

To give ocular demonstration by contrast with the foregoing, of the good which has been accomplished, by improving our breeds of stock, we annex a specimen of an *unimproved* cow, with all her original and acquired tendencies to lay off fat, and to give no milk. The counterparts of the specimen below, are not as uncommon as they should be. "*Look upon this picture, and upon that.*"



To Raise Quinces.

While fruit growing of all kinds is too much neglected by our farmers, who *could* make it the most profitable branch of their business, the cultivation of Quinces seems entirely so. The Quince tree is an outcast every where, generally found in some obscure corner or rendezvous for weeds; the trunk surrounded and almost concealed with a thick growth of suckers, being never trimmed, or pruned or manured, it seems to be considered one of those productions nature has designed to take care of itself. The truth is, how-

ever, that the Quince rewards as well for care and attention as any other fruit, and is improved by proper treatment, both in quality, size and productiveness. A *rich, deep* soil is required, which should be kept loose and open by the cultivator, or by the growth of hoed crops, and it is not by any means only adapted to moist land. From the fact of their growing well in such situations, it has been inferred that they will not do on upland, which is a mistake. Some of the finest quinces we have seen were from high and dry soils, and they will be found to do

there as well as other trees. An acre of Quinces, 10 feet apart, will admit of 430 trees, which will commence bearing about the third year after being planted. Very little pruning is required, save when young, to make the trunk strait, and form a round, symmetrical head. The fruit is produced from the little twigs or spurs on wood two or three years old. The same general principles of management are applicable as to other fruit trees, and without which it will be in vain to expect fine fruit. Perhaps more than any other, except dwarf pears, the Quince should be supplied with manure, dug in each fall, the consequent rapid growth to be regulated by the shortening in process.

The experience of the best cultivators proves that *salt* is a specific manure for the Quince tree, promoting growth and thrift remarkably, in a short time. About two quarts should be applied to each tree, or it may be sown broadcast, ten bushels to the acre. The Philadelphia market is seldom supplied sufficiently with Quinces. We recently priced some tempting specimens, fair, large and smooth, and were told fifty cents per half peck. They generally range from \$1 to \$2 per bushel, according to quality, and a Quince orchard in full bearing will yield two to four bushels per tree, at a moderate estimate. From the facility of picking, the expense would be less than any other fruit, the transportation to market much safer, and we believe the clear profit from an acre be greater than that from any ordinary three acres of corn, oats, wheat or potatoes.

Work for the Month.

FARM.—Before ground is too frozen, and while teams are in better condition than they will next Spring, plow and subsoil, especially on heavy lands, the fields for coming crops of corn; attend to stock in barnyard; provide sheds for shelter; fodder judiciously with straw, corn-fodder, and occasionally hay; remembering it is easier to *keep* them in a thriving condition, than to *get* them into it. Cows and young stock should be well cared for in well ventilated stables, and supplied with a few carrots, beets, or turnips each day; use the card frequently. Have water always at hand, and two or three lumps of rock salt in the yard for stock to lick at pleasure. Economise hay and straw by use of straw-cutter. Corn fodder should also be cut, before feeding, and if no steamer is a hand, empty the tough end of the stalks, or butts, which will generally be refused by the cattle, into a large hoghead, into which pour boiling water, and cover the top. After being softened by this process feed, with a little bran or meal sprinkled over. Have manure, as it gathers in barn-yard, collected under a rough shed in centre of yard. Provide some soil, or muck from swamps, which mix through it as heap is forming, and give occasionally a sprinkle of plaster. Prevent drainage from passing off, by col-

lecting liquid in a pit at one end, which should occasionally be pumped up, and poured or watered over the surface. Manure saved in this way is worth at least fourfold more in spring, than where it is scattered over yard, and exposed to weather. Collect and house carefully all tools and farming utensils. Open the mouths of drains and ditches. Avoid turning stock into pasture fields in soft weather.—Secure corn cribs from mice. Haul fuel when ground is frozen. Give plenty of litter, either straw or leaves from woods, to all stock, cattle, horses, sheep, and swine. For the latter boil small potatoes, pumpkins, and any refuse vegetables.

FRUIT ORCHARD.—Attend to general directions of last month. Bank up the earth around your trees to keep off mice. Dig in manure, or guano when ground is not frozen. Take advantage of open weather, to prepare for spring planting, by deep plowing and subsoiling. Where the object of pruning in young trees is to promote growth, now is the proper time. The amount of food collected by roots through winter is thus confined to remaining branches, instead of being distributed through tree and lost.

FLOWER GARDEN.—The principal work for garden in this month, will be cleaning borders and decayed plants and weeds, renewing walks, tying up to stakes and protecting half hardy plants and shrubs. Running roses should be secured firmly to their stakes or trellises, to preserve them from being broken by storms. Chromatellas, Solfatares and such likeroses, not perfectly hardy, should be well covered with straw or cedar boughs. Teas and other dwarf varieties may be protected with cedar boughs tied together at the top. Muleh well all roses and plants with short manure. Tie up junipers and other bushes with straggling branches.

Persons wishing early blooming plants in spring, may keep them through winter in cold frames. Dig out a hole a foot deep of size required, and fit in a box, sloping to the south if possible, two feet deep at back and 18 inches in front, bank up earth from the hole on outside, and lay a bed of coal ashes in bottom, to make drainage and prevent ingress of worms. Cover with sash, and protect in severe weather with straw mats and shutters. Verbenas, Primrose, Polyanthus, Pansies, Petunias, &c., will keep nicely in this way, and bloom early. Forward annuals in pots by placing them in frames early in spring.

See that plants in windows are not killed with watering. The *only* rule for this is appearance of soil in pots: water only when it appears dry. Keep them near light and turn round occasionally. The farther plants are from light give the less water, change water in hyacinth glasses, every week or ten days.

VEGETABLE GARDENS.—Attend to directions of last month. Finish covering with straw or litter, everything that needs protection. Commence com-

posting manures, so as to prepare them for spring use. Attend to arranging and securing all such seeds as will be required for spring planting.

Lectures on Agriculture.

The successful exhibition at Pittsburg, having we presume replenished the treasury of the State Agricultural Society it occurs to us that the approaching winter, a season of comparative leisure with farmers, might be well employed in engaging a competent person or persons to make a tour of the State particularly in those counties where Agricultural Societies are established, and deliver *lectures*, not only on Agricultural and Horticultural subjects, but also with the view to establish and cement a more intimate union, and correspondence between the State and County Societies. We cannot say exactly that a screw is loose here, but it is wanting altogether. It has never existed. An effort was made by our friend Judge Jessup, (whose sagacity and foresight reaches far ahead in such matters) during the first exhibition at Harrisburg, to promote this object to some extent, by suggesting that premiums be awarded to such local societies, as made the most liberal contributions to the State Exhibition. It was approved of at the evening session then held but that was the last we have heard of it.

We think much good might be accomplished in the plan proposed by us, provided one or more competent persons could be found to undertake it. Although much has certainly been done, our farmers in Pennsylvania as a general thing are not yet roused up to the improvement of their Agriculture. The foolish prejudice against what is called Book Farming, still exists in many places, (as if a truth, were any the less one, from being printed or written.) Information is wanted to be disseminated as to what has been done, and what may be done, to increase aggregate and individual wealth, by scientific cultivation, improvement of the breeds of Domestic animals, introduction of new seeds, improved implements, manures, &c. There are a thousand matters, relating to the culture of the soil which might be discussed and brought before the farmers to great advantage. Samples of wheat and other grain, new seeds, &c., might be taken around, by the lecturer, their history examined, and adaptation to particular sections elucidated, also models of improved machines. The formation of clubs of practical farmers in the different townships might be promoted to meet at stated times and inspect the management and culture of each other's farms, &c. This has been found highly useful in many places.

At present in Pennsylvania, whatever interest is excited by the annual fairs is allowed to slumber, for the succeeding year. The intermediate period is one of comparative inactivity so far as regards any effort to disseminate information, both with the State

and county Societies. The subject may perhaps be brought before the annual meeting in January.

Franklin county Agricultural Society.

We are indebted to Col. McClure, treasurer of the above society, for a copy of the Franklin Whig, published at Chambersburg, containing a full account of their recent exhibition, (the first one) with a list of the premiums and reports of the committees. We extract the following account from its editorial columns, which says:—

The display of articles on exhibition was truly astonishing considering that it was the first effort of the Society, and immensely curtailed by the weather. Every variety of Stock was on hand, and some of the very best specimens. The array of agricultural Implements was good, and the departments of Domestic Manufactures and Fancy Articles would compare favorably with many of the older Societies. Indeed, in every branch of industry the representation was most creditable; and the admirable spirit which seems to be infused among the farmers, mechanics and artisans of Franklin county, bids fair to place our Agricultural Society and our Exhibitions at once in the very front rank of such associations in Pennsylvania.

According to the regular programme, the address should have been delivered on Wednesday; but as the roads and ground were in a bad condition on that day, it was postponed until Thursday with the hope that the attendance would be larger and the grounds more comfortable. But the steady rain on Thursday rendered it necessary to adjourn from the grounds to the Court House to hear the address. Accordingly at 2 o'clock the people assembled in the Court House; when David F. Robison, Esq., delivered a most eloquent and instructive speech on the advancement of Agricultural Science. He was greeted with rapturous applause. As he was notified but a few days before the address had to be delivered, he could not comply with the request of the meeting to furnish a copy for publication. We hope, however, to be able to publish extracts from it. Hon. GEORGE CHAMBERS, President of the Society, rose then to announce the premiums; and in a few preparatory remarks he alluded very pertinently to the rapid strides now making to advance every department of science. He said he had been a member of an Agricultural Society in this county some 30 odd years ago, which in active members eventually dwindled down to himself, a few other lawyers and the Prothonotary of the county. Then, he said, there was not a steam vessel in this country; now there are over 3,000; then there was a not rod of railroad in the U. S.; now we have 10,000 miles of it. And he was glad that the great science of Agriculture was no longer to stand still while other less important sciences are advancing with astonishing rapidity. Speaking of the fine varieties of stock at the exhibition, and especially of hogs, he alluded to a long-legged, jaunty monster specimen exhibited at one of the old fairs in this county; and the discussion in committee was whether the Society should not buy the hog and kill him as a matter of favor to the owner and the community, instead of awarding a premium for him!

On looking over the premiums, awarded we find there was quite a list of horses on the ground; also Durham, Devon, Ayrshire and Teeswater cattle, Bakewell sheep; Essex, Bedford, Berkshire and Chester Coun-

ty pigs, a fine display of improved Poultry; also Butter, Cheese, Vegetables, Fruit, and a great variety of Agricultural Implements. Some elegant needle and fancy work were also contributed by the Ladies. The ground on which the exhibition was held appears to have been purchased by the society for its purposes, and the fences, buildings, stalls, &c., all put up the present season, involving a heavy outlay. This looks like permanency and is well worthy of imitation, under the circumstances of the unfavorable weather, and its being a first effort, we think Franklin county has done nobly. The number of members on the Treasurers' book is 739 already, which will no doubt be increased by another year. Much credit is given to the Hon. George Chambers for his exertions on the occasion. At the close of the exhibition, an election of officers was held for the ensuing year, which resulted as follows:

President—WILLIAM HUYSER.

Vice Presidents—John Orr, James Lowe, James X. McLanahan, Wm. H. McDowel.

MANAGERS—Wm. Bossart, Samuel Thompson, John P. Stouffer, Daniel Trostle, F. S. Stumbaugh, James C. Boyd, George Aston, Hezekiah Easton, James Davidson, Wm. A. Cox, Jos. Johnston, James Chariton.

Treasurer.—Alex. K. McClure.

Recording Secretary—S. M. Armstrong.

Corresponding Secretary—James Nill.

Choice rules in Breeding Stock.

We extract the following from "Cline's observations on Domestic animals," which are well worth attending to. In passing an opinion upon the high prices of fine animals, we are too apt to forget, that the excellence of form they exhibit, is not the effect of mere chance, but very often results only from the anxious care and skill, and perseverance of years. To breed away exceptionable points, and supersede them with those of great value, to fix in the animal tendencies and peculiarities, such as the disposition to lay on fat in certain places, fineness of bone, milking qualities, size, early maturity, &c., is altogether an uphill business, in which the very few only succeed, and in which a thorough scientific knowledge of animal anatomy and physiology, and years of close observation are required. When the happy results are before us in the living carcase, we admire and are apt to exclaim how very simple, easy and beautiful. Like as with fine specimens of art, the labor of execution is not appreciated. One of our greatest poets, on one of his most beautiful and easy flowing passages, being spoken of and he congratulated on the apparent ease, and rapidity with which he wrote, replied that very passage cost me months of anxious thought."

A single injudicious or unfortunate cross may undo the labor of years. Bakewell was several generations by the most careful selections before he brought his sheep up to his desired standard, of fattening at an early age, with a small consumption of food, and

with a small amount of offal. The present Jersey cows, are the result of at least 12 years of effort. Two beautiful cows were about that time ago selected by the lieutenant Governor of the Island, one was considered perfect in her barrel and forequarters, the other equally so in her hind quarters, and from these two, a scale of points, was adopted, consisting of 33 for bulls, and 36 for cows and heifers. So long ago as 1800, they were acknowledged to be superior for milk and butter, and having been bred with this view, ever since, as well as for the improvement of their original form, the tendency in these particulars, may be said to be fixed and hereditary. Without pursuing the subject farther ourselves at present, we refer the reader to what Cline says. All experience proves he is correct, that the female should be the largest. "Dam the best," as our friend J. Pedder used so often to urge.

"Although the form of domestic animals has been greatly improved by selecting with care those possessed of the best shape for breeding, yet the theory of improvement has not been so well understood, that rules could be laid down for directing the practice in every case; and although the external form has been much studied and the proportions well ascertained, these are but indications of internal structure,—the principles of improving it must, therefore, be founded on a knowledge of the structure and use of the internal parts; and of these, the lungs are of the first importance; it is on their size and soundness that the strength and health of an animal principally depend, the power of converting food into nourishment being in proportion to their size, an animal with large lungs being capable of converting a given quantity of food into more nourishment than one with smaller lungs, and therefore having a greater aptitude to fatten. The external indications of the size of the lungs are, the form and size of the chest, but a deep chest is not capacious, unless it be proportionally broad.

"The pelvis is the cavity formed by the junction of the haunch-bones with the bone of the rump, and it is essential that this cavity should be large and capacious; its size is indicated by the width of the hips and the breadth of the twist—which is the junction of the thighs—the breadth of the loins being always in proportion to that of the chest and pelvis. The head should be small; the length of the neck in proportion to the height of the animal; the muscles and tendons large, the strength of the animal depending more on the muscles or tendons than on the bones; many animals with large bones are still weak, and those that are imperfectly nourished during their growth, have their bones often disproportionally large. A compact, round made body, a deep, full chest, a broad loin, full flank and straight back, a small head and clean chaps, with fine tapering neck, limbs and bones not coarse and large, a soft but not thick skin, with soft and fine hair, are amongst the chief marks of a good kind.

"It has been generally supposed, that the breed of animals is improved by the largest males; this opinion has done considerable mischief, and probably would have done more, if it had not been counteracted by the desire of selecting animals of the best form and proportions, which are rarely to be met with in those of the largest size; experience has proved that crossing has only succeeded, in an eminent degree, in

those instances in which the females were larger than in the usual proportion of females to males, and that it has generally failed when the males were disproportionately large. If a well-formed large buck be put to small ewes, the lambs will not be so well shaped as their parent; but if a good *small* buck be put to larger ewes, the lambs will be of an improved form: the improvement depends on this principle, that the power of the female to supply her offspring with nourishment, is in proportion to her size and to the power of nourishing herself from the excellence of her constitution. The size of the foetus is generally in proportion to that of the female parent, and therefore, when she is disproportionately small, the quantity of nourishment is disproportionately small and her offspring has all the *disproportions* of a starveling; but when the female, from her size and good constitution, is more adequate to the nourishment of a foetus of a male smaller than herself, the growth will be proportionately larger, the larger female has also a greater quantity of milk, and her offspring is more abundantly supplied with nourishment after birth. To produce the most perfectly-formed animal, abundant nourishment is necessary from the earliest period of its existence, until its growth is complete.

"To obtain animals with large lungs, *crossing* is the most expeditious method, because well-formed females may be selected, from a variety of a large size, to be put to a well formed male that is rather smaller;—by such a mode of crossing, the lungs and heart become larger in consequence of a peculiarity in the circulation of the foetus, which causes a larger proportion of the blood, under such circumstances, to be distributed to the lungs than any other parts of the body, and as the shape and size of the chest depends upon that of the lungs, hence arises the remarkably large chest, which is produced by crossing with females that are larger than the males: but this practice must be limited, for it may be carried to such an extent that the bulk of the body might be so disproportioned as to the size of the limbs, as to prevent the animal from moving with sufficient facility, so that, where activity is required, this practice must not be extended so far as in those which are intended for the food of man. The kinds of animals selected for cross-breeding ought never to be of *very* different habits and sizes, for notwithstanding the confessed advantages derived from cross-breeding, yet, great or sudden changes are highly improper, that having often been found injurious to the health and character of the stock; the use of the bucks of the pure Dishley or Bakewell stock has with several coarse flocks of sheep, been attended with no sensible advantage, owing to this cause, the characters and habits of the breeds being so widely dissimilar. Whenever, then, cross-breeding is attempted, care ought always to be taken to do it gradually, and to rear the progeny in a proper manner; and when the matching is conducted progressively, and with due attention to the diversity of habit in the animals, it succeeds well, the chief art being, to begin gradually at first, and in process of time, as the blood of one family is diminished, that of the other will be increased, till improvement to the degree wished for be attained by gradual approximation.

"The great improvement of the breed of horses in England arose from crossing with those diminutive stallions, Barbs and Arabians; and the introduction of Flemish mares was the source of improvement in the larger breed of cart horses; the form of the swine has also been greatly improved by crossing with the small Chinese boar; but when it became the fashion

in London to drive large bay horses in carriages, the farmers in Yorkshire put their mares to much larger horses than usual, and thus did infinite mischief to their breed, by producing a race of small-chested long-legged, large boned, worthless animals; and a similar project was adopted in Normandy, for the purpose of enlarging their breed of horses, the use of the Holstein stallion, by which the best breed of horses in France would have been spoiled, had not the farmers discovered their mistake in time, by observing the offspring much inferior in form, to that produced by their own horses."

For the Farm Journal.

Bedford County Exhibition.

MT. DALLAS FARM, NOV. 1853.

J. L. DARLINGTON, ESQ.

DEAR SIR:—The second annual exhibition of the Bedford County Agricultural Society, was held in the borough of Bedford, on Tuesday and Wednesday, October 18th and 19th. Several thousand people were present, and all seemed delighted with the display made by the farmers, mechanics, and ladies of our county. The exhibition was held in the Court House, jail yard, and public square, and never before were those places so crowded, at least not the *jail yard*.

In describing a Fair it is rather difficult to know where to begin. But since Bedford county takes great pride in her horses, and can successfully compete with any other county in the State in a display of these animals, I will first notice the show made in this department of the exhibition. The horses exhibited numbered between two and three hundred, and there was not a mean one in the whole number. Our horses are generally iron-greys, mostly of the breed called by our farmers, "*the wild-mettle*," though they are perfectly tractable, yet spirited. We also have many bay horses, descended from the old Canadian stock, which, crossed in with our mountain horses, has made a breed of good size, great endurance, and beautiful appearance. Our horses frequently bring from two to three hundred dollars, even before they are well broken, and these prices are paid by farmers and persons who buy them for actual service, and not by the *young bloods* of the cities, who purchase horses, generally, to make a "*splurge*" at fictitious prices. Taking into consideration the limited means of our society, the premiums (\$10) on horses, was quite liberal.

The display of cattle was also good, considering that our county is not particularly adapted to raising fine looking cattle: the climate being rather cool, and our winters generally long and cold. Had we a convenient outlet for our produce, our county would certainly excel in dairy produce and wool growing; for it is particularly suited to both these branches of the rural art. Charles Smith, Joseph Diehl, and John G. Hartley exhibited some fine Durham cattle, the majority of which had every appearance

of being full bred. H. Ickes and Wm. Hartley exhibited several Devon cattle. Besides these there were a great many fine native cattle on exhibition.

Charles Smith and J. Diehl exhibited several pens of Southdown, Cotswold, and Leicester sheep.

Wm. & J. G. Hartley exhibited some fine pigs, cross of the Suffolk and Dutchess, and Suffolk and Berks line, from the pens of Adrian Cornell, of Bucks county. G. D. Trout exhibited Yorkshire, and H. Dibert Chester county pigs.

Of course there was a good display of Shanghaies, Chittagongs, Cochín China, and other fowls.

Though we had a remarkable dry season, yet there was a large display of vegetables and grain of various kinds. The grain was very heavy. Wm. Hartley exhibited one bushel of blue stem wheat, weighing 69½ lbs., and J. G. Hartley one bushel of Mediterranean wheat, weighing 68 lbs. I suppose there was over twenty bushels of wheat exhibited, by as many different persons, all of which ranged from 66 to 69½ lbs. As there was a great deal of anxiety felt as to whose would weigh the most, the committee measured and weighed each bushel carefully. Rye exhibited by G. W. Smith weighed 64 lbs., and oats by A. Compher 42 lbs.

The dairy and Mechanical interests, were well represented. There was also a picture gallery containing the portraits of our old citizens, many of whom are dead, also all the fine paintings, engravings &c., which could be collected in the town and surrounding country.

But the display made by the ladies, surpassed even the exhibition of the State Fair at either Harrisburg or Lancaster.

Only one more article and I am done. You may have heard of a car-break lately invented by Michael Shimer of our county, as its name implies it is intended to break the momentum of a train of cars, when running with their greatest velocity: it is said this contrivance will stop a train of cars running at their usual rate, within from 10 to 20 feet without concussion. It has recently been tried on the central route and proved satisfactory to the most sanguine expectations of every body, who witnessed, it, and it will confer lasting honor on the inventor should it come into general use, which it will do no doubt.

Mr. Shimer was the original inventor of the *Spark Catcher*, but reaped no reward from his invention.

Your obedient servant,
Mt. Dallas Farm. W. H.

For the Farm Journal.

Improved Poultry.

The season of our great Agricultural Fairs having past, and numbers of improved animals having changed hands, will it be asking too much, to request for publication, in the *Farm Journal* exact accounts of profit and loss.

Why have we not heretofore frequently had, in

this county, such accounts? Let them be made with as much care, as the State Society requires, for field crops or the produce of cows.

Is not that the best animal, that will give the greatest product of labor, carcass, butter or eggs, in the shortest time, with the least food? Would not such data, be most important for *Chicken committees*, in making their awards? Would it not be well for our society to bear this in mind, when "getting up" the next schedule of premiums? Is not that exhibitor best entitled to a liberal premium, who gives well attested evidence of the most productive poultry?

To you then who are in the "fancy" let me urge the propriety of keeping strict account of cost of stock, quantity, quality, and price of food consumed, number, weight and "QUALITY" of eggs and chickens produced in a given time.

The public then need not long be in doubt about the best varieties or manner of keeping.

Please begin now or with the beginning of the year or at any time to suit your convenience, and at our next Autumnal exhibitions, have such an array of facts as shall redound to the credit of yourself and county, whatever it may do for Shanghai's, Black Spanish, Java's, Dorking's, Mr. T's favorite Chittagongs, or any other variety with or without remote ancestors."

J.
Chester Co., Oct. 24th, 1853.

Recent Importation of Stock.

By the ship *Mary Carson*, having been seventy-eight days on her passage, there arrived two Durham heifers from Dr. HERMAN WENDELL of this city; four Durham heifers imported by GEO. VAIL, Esq., of Troy, for S. P. CHAPMAN of Madison county, and two thorough bred Devon heifers and one Devon bull, for GEO. VAIL, Esq., of Troy.

The Durhams imported by Dr. Wendell and Mr. Vail, are from the herd of Robert Bell, and are bred from Duchess bulls of the late Thomas Bates, Esq. The pedigree of Dr. Wendell's are as follows: *Lady Liverpool*, sired by 3d Duke of York, (E. H. B. 10, 166;) dam Lily, (10, 177,) dam, Bright Eyes 2d, by Lord George Bentick; *Frantic*, sired by 4th Duke of York, dam, Faith, by 4th Duke of Northumberland, and *Boukie*, (cow,) sired by 4th Duke of York, dam, Cicely, by Duke of Northumberland. These arrivals make a fine addition to Dr. Wendell's stock, in which are several heifers sired by Duke of Wellington, and Meteor, the premium bull formerly owned by Mr. Vail.

The following are the pedigrees of Mr. Chapman's heifers: *Agate*, sired by 3d Duke of York; dam Annie, by 3d Cleveland Lad; *Bright Eyes 3d*, sired by Earl Derby, (10, 177,) dam, Bright Eyes 2d, by Lord George Bentick; *Frantic*, sired by 4th Duke of York, dam, Faith, by 4th Duke of Northumberland, and *Boukie*, (cow,) sired by 4th Duke of York, dam, Cicely, by Duke of Northumberland.

Mr. Vail's Devon heifers are from the herd of Lord Leicester, and the bull is from the herd of John T. Davy, the editor of the *Devon Herd Book*. We learn that Mr. Vail has concluded to collect a small select herd of Devons for his farm, as breeders.

The same vessel also brought two Short-horn heifers for Lorillard Spencer, Esq., of Westchester; a Short-horn bull, "Harry Lorrequer," sold at Mr. Fawke's sale for 130 guineas; also two other valuable

young bulls, "Liberator" and "Squire Gwynne 2d," bred by J. S. Tanqueray, of Henden, near London, as well as several others from other breeders; and a lot of Cotswold sheep. These last are for parties, we understand, at Boston and in some of the western states.—*Cultivator*.

Poultry.

Prize Fowls.—In exhibiting Cochin China fowls, nothing is more important than matching in colour, because there are classes for different tones, and if a cinnamon cock be put with buff pullets, of course, success cannot be hoped for. It is a mistake to suppose, because the prize list class buff and cinnamon together, that birds of both colours may be put in one pen. It must be entirely of one or the other, and in such a class judges can give no preference to either, but must decide according to the other merits of the birds. Choose them with small, upright, straight, well-serrated combs; naturally small tails; ample buff, and well feathered yellow legs. Select them as large as you can, but recollect size is not the only merit, nor is it the most important point. Look for sharp intelligent heads, legs as short as possible, colour uniform throughout. Do not be discouraged if your fowls are not very heavy, but at the same time, make them as good as you can. Hens 8 lbs. each, and cocks 9 lbs. to 10 lbs. have little to fear. Above all, avoid any trimming or mutilation, which, meant for improvement, can only end in disappointment and disqualification. Dorking fowls, like all others, should match in form and colour; not because colour is any indication of purity in this breed, but because it is essential to ensure success, that every possible precaution should be used; and as I have before written, if the competition be very close, as it always is where the entries are numerous, perfect uniformity may turn the scale. Pullets of a dark chocolate ground, with white spots or splashes, should be put with either a black-breasted red cock or a red and white speckled cock, with black and white mottled breast. Brown hens with black speckles may go with the same cocks, or with a very dark cock, with a little ginger in his hackle, saddle, and wings. Grey hens of every shade should be put with a cock having black breast and tail, silver hackle and saddle. Cuckoos must be all alike; in these birds alone can cocks be found with precisely the same plumage of the hens; the combs should always be uniform. Choose birds with fine heads, very deep bodies, good carriage, head and tail erect, short white legs, five claws distinctly defined, and prominent breasts; 6½ lbs. for hens, and 9 lbs. for cocks are capital weights. No fowls are so heavy in small compass as the Dorkings; their compactness takes away the appearance of size. Without being deterred by the accounts you will sometimes read of impossible fowls, and marvellous weights, if you can select them right in colour and about the weight I have mentioned, exhibit them with confidence, and even if they are somewhat lighter. Hundreds of successful exhibitors have been surprised to find themselves possessors of large silver medals and valuable prize stocks, when they imagined they were barely "mediocre." *John Bailey*.—*Gardens Chronical*.

GERMAN PRUNES.—Mr. Frederick Pfeifer, of Indiana county, Pa., has succeeded in bringing this fine fruit to a great state of perfection in this country.—He raises immense crops without any difficulty. The value of this fruit, either green or dried, is not second to any of the plum variety.

On the Breeding of Horses.

From the Mark Lane Express.

The letter of your able and experienced correspondent "Cecil" induces me to trouble you with a few remarks on the same subject. I am sure that he is right in saying that "owners of stallions are often reluctant to submit their horses to the opinion of those who are selected as judges." I go further than this; for I maintain that their reluctance is a well-founded one, inasmuch as the majority of decisions are based on the mere individual caprice of those who happen to be the judges for the day. For my own part, I will never in future exhibit a horse of any description until two radical changes are made in the principle in which the premiums are awarded.

1st. Let a scale of points be drawn up, by men of acknowledged authority, which is to be taken as the standard of perfection. This plan has already been adopted at the exhibitions of Guernsey cattle. No prize is there allowed to be awarded to any cow or bull which does not possess a given number of the required points. In the case of horses it might be advantageous to go further, and to make certain points essentials, and others accessories. To begin with the case mentioned by "Cecil"—that of bad hocks, which, according to him, were looked upon as a venial defect by the judges at Gloucester: I would stamp them as at once disqualifying a horse from winning a prize, either as a hunter, or as a stallion for getting hunters, even did the animal which was so unfortunate as to possess them exhibit every other merit under the sun. In like manner, mal-formed feet, whether contracted or too flat, ought to be a decisive disqualification for every kind of horse. All horses too, ought to have their legs properly set on, and to possess good action, taking into account the purposes for which they are intended. I give these as indications of what I consider the essential points of a horse, but by no means a complete list.

These cardinal points being disposed of, I pass to those which, although not essential, indicate either beauty or some useful quality, and which must therefore not be disregarded.

The shape of the head is, when symmetrical, both a mark of high blood, (although many thorough-bred horses have bad heads,) and denotes an animal light and pleasant in hand, especially when well set on a neck naturally arching, so as to allow of the head being drawn downwards and inwards without difficulty to the rider or distress to the horse. A star-gazer, or ewe-necked brute, though always ugly, may do useful work in harness, but would be as unsafe as unsightly for a hunter. Many persons attach importance to a horse being well ribbed up. Provided the shape of the barrel is good, considerable latitude may be allowed on this point. The hips ought to present sufficient width; ragged hips may be unsightly, but I prefer them to those which are too narrow. A long hind quarter is handsome, but; some good horses are both short there, and goose-rumped.

These are mere hints jotted down in haste. Let a committee of experienced judges be commissioned by the Royal Agricultural Society to prepare a table of points, attending first to those which are essential to all horses; secondly, to those which are the characteristics of each separate class, whether hunters, roadsters, or farm horses; and thirdly, to those which, though not absolutely necessary, are nevertheless desirable as indica-

tions of some good quality. The breeders of horses will then be in possession of an object at which to aim; Exhibitors will have some idea as to how far the animals they send conform to the standard thus promulgated by authority.

How different, and how infinitely to be preferred from the state of affairs at present. Perplexing indeed, when selecting a horse for show, is the reflection you have neither principle to guide you in your choice, nor clue as to what will govern the decision of your judge. Some judges prefer a large horse, others a small, compact one; one gives the palm to blood, another to power; a third likes bone; while a fourth is only to be propitiated by a big body.—Action is everything with some persons, and nothing with others; some look at the head, others at the hocks; and a few of the more judicious are critical concerning the setting on of the forelegs and the position of the shoulder. There is one piece of advice which I can give to exhibitors, and only one which will be of the slightest practical use; attend above all things to the condition of the animal which you show. Let him be as fat as possible, and let his skin shine like a star. Never mind the means, but make this your aim; and if you do not win, you must either have an animal bad indeed, or your luck must be worse than your horse.

Seriously speaking, this is the only principle which I have been able to discover which invariably, and under all circumstances, governs the decisions at agricultural shows. The horse or the colt which is in the highest condition, and is best "got up," is certain to be the winner. It is melancholy that it should be so; but it is alas! the fact that the judges must have something to "flatter, the eye," as well as the common herd who are no judges! It is my firm conviction that no degree of merit would suffice to secure a premium to a horse thin and out of condition. I might have substituted the word "animal" for "horse," in the last sentence; but with regard to cattle or sheep, there is at least this excuse—that the "aptitude to fatten" is with them one point of perfection. Is this the case with the hunter, the hack, or even the team-horse? For my part, I call that man a judge in the highest sense of the word, who is able able to discern merit, or the promise of it, under a rough skin and an unpanpered condition, and who, on the other hand, has the strength of mind to reject a defective form, even though eye be flattered by the condition ever so alluring to the vulgar eye.

I must defer the discussion of the second change which I propose until another letter, should you think fit to allow me the space.

WILLOUGHBY WOOD.

Don't Sell Your Best Stock.

Don't allow these speculators and drovers to pick out the likeliest and best of your stock, leaving you only the ordinary and poorest to breed from. It is the worst policy you can adopt. By continuing such a course, it will be but a short time before you will have only ordinary and poor to select from. Supposing you can get a little more for this likely lamb than for the others, you will do well to remember that it costs no more to keep them than it does poor ones; and next shearing time the large fleeces will tell the story in favor of keeping the best you have.

If you intend to make a practice of raising a colt every year, keep the best mare you can afford. Haven't you noticed that when a man comes to purchase a young horse he is always particular to know

all about the stock, &c., before he concludes his trade? Keep the best, then, for yourself.

Don't sell your best cow because you can get five dollars more for her. Keep her, and she will more than make up the difference ere another year comes around. Just so with everything. Select the best seed for your own use; and you will always have as good as any one, and be sure of the highest prices for any you may wish to dispose of. Think of it.—*Maine Farmer.*

Reasons for Supplying Cattle with water in their Yards.

If water cannot be obtained by cattle without going out of the yard, they will many times suffer exceedingly for the want of it, rather than go for it in very bad weather. If good fresh water can be had by them without going out of the yard, they will drink very much oftener than in the other case, especially in cold weather. The oldest and strongest cattle will generally go first to water; and when they have drunk, and are returning, they will meet the young cattle in the narrow snow path, and of course will drive them back; in which case the youngest and feeblest of the herd will have much trouble and vexation in obtaining water at all. When cattle go to a spring to drink especially if the snow is deep, there will generally be great difficulty in reaching the water on account of the bank of snow and ice, without stepping into it, which cattle are loth to do if they can help it; many watering places are so steep that cattle are compelled to go down on their knees before they can reach it, and even then, they obtain it with the greatest difficulty. The cattle on many farms are obliged to travel from one-fourth to half a mile for water, and when they arrive at the spot, it is often only to be obtained by them through a hole cut in the ice, perhaps from a foot to eighteen inches in thickness. The amount of manure which is dropped and lost on such occasions is very considerable, and much of it is washed down by the rains into the hole at which they are doomed to drink, where it forms a coffee-colored beverage, awful to behold. Every good farmer will esteem this as a matter of no light importance, considering that all the manure ought to be saved, and calculating that the food of cattle might as properly be wasted as the food of plants. It has been thought that the exercise of going to water at a considerable distance, is advantageous in preventing the hoof-ail in cattle; but it is much more likely that this disorder often arises from the filth in wet weather, and freezing of the feet in their walks to the spring. If cattle are kept in well sheltered yards with sheds for their protection, with uninterrupted access to good water, plenty of salt and warm beds of dry straw, it should not be too much to promise that they will remain free from the hoof-ail and every other "ail" of which we have so much complaint. There is a strong prejudice against wells for the supply of water in cattle yards, and there is a much stronger prejudice against the labor of pumping the water for them; but to a industrious man, the "prejudice" of a desire to furnish his cattle with a clean and wholesome beverage, cool in the summer and warm in the winter, will be stronger than either.

AT THE VIRGINIA STATE FAIR \$39,000 has been subscribed for the benefit of the State Agricultural Society.

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Prize Essay on Pigs.

[CONCLUDED FROM PAGE 236.]

The best and most economical Mode of Rearing, Keeping, and Fattening Pigs.—In selecting males and females to breed from, neither should be chosen less than twelve or fifteen months old: the third litter will generally be found the best for this purpose. Whether as boar or sow, the finest of each sex ought only to be selected. By these means only will the good points of any breed be perpetuated. There is generally one small pig in every litter, called the riddling—this should never be used as an animal to breed from. For sucking pigs and porkers colour is an object—these should invariably be white. For bacon hogs, colour is a matter of indifference, other than the fact that black pigs appear generally to do better on the same amount of food than the white breeds. A singular reason was assigned to me for the prevalence of black-coloured pigs in Essex, viz: that the white kind was subject to eruptions of the skin of the black when put into the clover-fields, whilst the black kinds were not obnoxious to this complaint. Probably the white kind had more of the Chinese, and the other more of the Neapolitan breed. It must be remembered, also, that the old Essex breed was a black one. A sow's usual period of gestation is from sixteen to seventeen weeks. When she has arrived near the period of farrowing she will be seen collecting and carrying straws in her mouth, to form her bed. If there exists any suspicion that the sow will devour her young, as sometimes is the case, care should be taken that she is securely muzzled. All such sows should be fattened and slaughtered. The carnivorous habit here alluded to is rarely exhibited amongst the improved breeds; amongst the old sows of the rough breed this habit was somewhat prevalent, probably brought on in many instances through deficiency of food.

Sows should be put to the boar at such times as to avoid farrowing from the middle of October to the end of February, unless sucking pigs for the festive time of Christmas and the new year is the object; if so they should be well littered and kept warm. Whether intended for sucking pigs, porkers, or stores, skimmed butter-milk and whey, mixed with steamed potatoes, and a little barley, pea, or oatmeal, should be given in moderate quantities even when sucking; if intended for porkers, they should be kept continually fed up with this mixture. Sucking pigs should never be allowed to run about, and porkers only permitted sufficient exercise to keep them in

health. Where convenient, store-pigs may be allowed to pasture in clover, giving them only a morning and evening meal in addition, or they may be allowed to root in fallows or on the dung-heap, and during winter in the straw-yard. In fallows and rough pastures swine eagerly devour such weeds as dandeline, chickweed, sowthistle, &c.

For store pigs, exercise is necessary in order fully to develop the frame. In feeding, tranquility is equally indispensable, a singular exemplification of which was made in the course of the experiments of the Earl of Egremont (1777,) related in the "Annals of Agriculture," upon some porkers, seven of which were put up to fatten in the ordinary manner in a sty, and another of the same brood, but smaller than the others, was put into a cage one week later. All were fed alike on barley-meal. When slaughtered, the one fed in the cage exceeded in weight any of the others. The cage was made so that he could not turn round, and had only sufficient room to rise up and lie down. Whether this mode would prove advantageous on the large scale is a matter of doubt. The experiment has however been adduced by Baron Liebig as a practical evidence of the correctness of his theory respecting the formation of fat. Too much exercise is well known to retard fattening; or, to use the ordinary phrase used by farmers, "they run all the flesh off their bones."

Where a large number of hogs are to be fattened and bred, it has been recommended that the sties should form a semi-circle, the steaming apparatus, &c., being placed by the straight side. This form has many advantages. In a general way, the feeding of hogs will only form a minor adjunct to the other business of the farm, and at only few places will it be found convenient to erect new buildings for the purpose, however advantageous they might eventually prove. There are some circumstances connected with sties which should be INVARIABLY attended to: these are, that their floors should be well paved with stone, flag, or hard brick, the interior should be elevated half a foot above the exterior area, and a sufficient slope afforded to both, with proper drains to carry all moisture to the dung-heap. Separate sties must be kept for breeding-sows, weaning pigs, stores, and fattening pigs.

Sties should be so constructed that the swine may be fed without the feeder going amongst them; and divisions should be made in the feeding-trough, according to the number of swine, in order to prevent the strong driving away the weak; if they can be

made to communicate conveniently with the strawyard and dung-heap, all the better, particularly for stores and brood-sows.

The sties should be frequently swept and washed out, and lime-whitened at least three times during the year. The most profitable mode of feeding store-pigs is to commence by giving only inferior sort of food thrice a day, bettering the quality and increasing the quantity as the frame becomes perfectly developed. The store or youthful period of all animals occurs when their vital and nervous energies are at the highest, which enables them to assimilate nutriment from indifferent food. Moderate exercise at the same time assists nature and aids the full development of the frame, the animal being thus gradually prepared to take on that increased amount of muscle and fat which ultimately repays the farmer for his toil and expenditure. In making choice of food for hogs there can be little doubt but potatoes, when plentiful, mixed with pease or bean-meal is the most economical food for store pigs; and the same food mixed with Indian meal and butter-milk is the best adapted for feeding porkers. In cheese dairies, pease or bean-meal should always be mixed with the whey, in order to replace the caseous matter abstracted by the cheese. Swede turnips boiled form only an inferior substitute for potatoes, their feeding properties not being equal to carrots and parsnips; in fact, on the two latter, hogs will do well if combined with milk and a little bean or pea-meal. Oatmeal and skimmed milk is the best food for aiding sucking pigs and very small porkers of 40 to 50 lbs. weight.

The theory of the action of the various articles of food named is as follows—amylaceous or starchy food, such as potatoes, aid in sustaining the animal heat and the formation of fat, the latter property being much increased when assisted by other nutritious matters in a more concentrated form, particularly maize or Indian corn. Pea or bean-meal, from the great amount of caseous matter which they contain, should invariably form a portion of the food of growing pigs, affording, as they do, the material for forming the cellular and other tissues, in such a high degree indeed that hogs fed on bean-meal alone are well known to form bacon disagreeably hard. Where pigs are fed without skim or buttermilk, pea or bean-meal should form an invariable part of their food. An inferior substitute for pea and bean-meal is frequently used in the shape of bran and pollard which contain a considerable portion of the elementary substances required to develop the bones and tissues. In the present uncertainty of the potato-crop it would be hazardous to make that tuber the basis for the calculation of the cost of producing swine's flesh: if it unfortunately eventuate that the potato, from its liability to disease, should in a great measure cease to be cultivated to the extent that it has formerly been, the feeding of hogs will necessarily be thrown principally on milk and grain. If this should prove to be the case, barley, from the large amount of starch which it contains, will be found the best substitute for the potato; in which case one-third by weight of barley, one-third of bran or pea-meal, and one-third Indian meal, will be found the cheapest and best mixture for growing hogs; the pea-meal to be lessened and the Indian meal increased as the hog approaches maturity.

Potatoes mixed with above grains form the most appropriate food for store and fattening hogs, gradually withdrawing the potatoes, and finishing the feeding with dry balls of the mixture named. For

exquisitely fine pork, whether to be consumed fresh or as bacon, the hogs should be fed solely on skim and buttermilk mixed with oatmeal. The mixture of Indian corn, barley, and pea-meal forms a very close imitation of the constituents of oatmeal. It has been found very profitable to consume tares by store hogs.

Since the preceding was written the writer has had the opportunity of visiting the exhibition of the Smithfield Cattle Club (1848); and from observations made there of the comparative merits of the different breeds of swine, together with their outward physical appearances and structure, he was glad to find that the preceding observations were fully borne out. For instance, the Earl of Radnor's Coleshill pigs, 18 weeks and 2 days old, must be descended from a cross of the Chinese and improved Berkshire. They were fed on barley-meal and whey; had a little pea-meal been added they would have made a better appearance. This breed is admirably calculated for full-sized porkers of 80 lbs. weight. Lot 99, which obtained the second prize of 5*l.*, were described as 14 weeks old true Essex pigs; obtained the breed originally from Mr. Hobbs, fed on barley-meal and milk. In this lot the Chinese breed predominated, as exhibited by their broader muzzles. Lot 98, described as Heathfield pigs, were admirably calculated for porkers, whilst lot 97, from the stock of Mr. F. Hobbs, fed on Indian corn-meal, barley-meal, and skim-milk, exhibited more of the points of the Neapolitan, and would have shown their best points at 10 or 12 months old. Lot 95, which took away the highest prize in this class (10*l.*), was fed on middlings, barley-meal, pea-meal, and potatoes. They were christened "Improved Middlesex;" they were however undoubtedly obtained by crossing the Chinese, Neapolitan, and improved Berkshire and old Essex. The Neapolitan form predominated in this lot. For bacon hogs there was a lot exhibited, No. 189, by Mr. Matthew Newman, of improved Buckinghamshire and Berkshire pigs. They were of a brackly colour, were highly commended, and, for 12 to 18 months old hogs, are a most desirable breed.

In looking over the pigs exhibited at the late Smithfield Exhibition it will be seen that those fed on barley-meal, pea-meal, and skim-milk, or analogous food, were the finest animals; that, in the smaller class of pigs, the improved Essex breed was preferred; the only prize taken by any other breed being by his Royal Highness Prince Albert, which I attribute not to the breed but to the food. Mr Pusey's pigs were very fine specimens of the hardy rough Berkshire kind; they were 73 weeks old, fed on barley-meal, toppings, peas, and wash. If there was any fault to be found with them it was that the fat appeared slightly deficient in firmness. The breed of which Pusey's were specimens is well calculated to rough it on coarse and scanty fare during the store period, and are good foragers if sent abroad to look for their livelihood.

Some excellent pigs were exhibited amongst the extra stock; the one which obtained the silver medal, a cross between the Suffolk and Berkshire breeds, 48 weeks and 3 days old, fed on barley and pea-meal, was a very fine specimen, and admirably calculated for a bacon hog. Mr. Barber's improved Middlesex (Qu. Essex?), 24 weeks and 4 days old, fed on middlings (coarse flour), barley-meal, and potatoes, was a fine specimen of the small breed. His Royal Highness's Bedford and Yorkshire pig, 40 weeks and 3 days old, fed on barley and pea-meal, peas, and skimmed milk, was very justly highly

commended by the judges.

Sufficient examples have been shown to prove that the cross known as the improved Essex is the best breed for general purposes, if intended to be slaughtered under 12 months old. For larger animals crosses from the larger breeds which do not arrive so early at maturity are to be preferred. The examples here adduced also go far to prove that where the breed and mode of feeding recommended in the prior part of this paper are combined, there the greatest amount of meat and fat is formed, and on trial it will be found also to be at the least expenditure of food and capital. It will be well to observe that middlings is an inferior description of wheaten flour; toppings or sharps is a fine description of pollard; all of which contain muscular and tissue-forming substances very analogous to pea and bean flour. In some localities favourable to the purpose, a number of hogs are reared and even fattened in what may be termed a wild state, on acorns and beech mast. I do not know of any experiments that give sufficiently accurate details of all the circumstances requisite to arrive at correct inferences respecting the cost of obtaining a given amount of swine's flesh from a stated quantity of food, all the experiments detailed in the Sussex, Buckingham, Hampshire, Middlesex, Shropshire, &c., reports to the Board of Agriculture being more or less deficient in details which are requisite to form correct estimates. One important experiment reported in the Buckingham Survey ought not to be passed over, as it serves to show accurately what is well known to pig-feeders, that there is a point in fattening hogs beyond which a decided loss will accrue if persevered in. Thus, the increase of flesh in a pig put up to be fattened, and regularly weighed, was, on the following dates:

	Stones	lbs.	lbs.
Oct. 10	36	7	
24	41	5	38 gain
Nov. 7	45	7	34
21	47	2	11
Dec. 5	48	7	13
22	48	6	1 loss

It is well remarked in the Hampshire Survey—

"That the native hog of this county is a coarse, raw-boned, flat-sided animal, agreeing in no respect with the idea entertained of it in other parts of the kingdom; the greater number fed for a few weeks in the close of autumn upon the mast which the forest and other woodlands produce in the county, and the excellent mode of curing hog-meat practised by the housekeepers have contributed in a far greater degree to establish that superiority ascribed to Hampshire bacon, than any inherent excellence in its native breed of hogs."

"Very few, however, of the genuine native hogs are to be met with, the common stock being either the native Berkshire breed, or a considerable predominance of that blood in the native swine of the country."

"Subsequent crosses upon the native Berkshire with the Suffolk and Chinese breed have produced an animal of a hardy nature, prone to get fat at an early age, and always to keep in good condition in a store state. The experiments made by Mr. Butter of Liphook show that nearly 100, that is, 96 lbs. of bacon, may be obtained from the consumption of 9 bushels, or 450 lbs. of barley equally 4½ lbs. of barley for 1 lb. of bacon, and which, admitting the barley to be worth 1d. per lb., the bacon thus produced will cost, exclusive of attendance, 4½d. per lb."

"The barley reckoned at 4s. 6d. per bushel, inclu-

ding grinding, and the bacon at 6d. per lb. in its green state, the account will stand thus—

	£.	s.	d.
96 lbs. bacon at 6d. per lb.	2	8	0
9 bushels of barley at 4s. 6d.	2	0	6

Leaving a profit upon 9 bushels of barley thus expended of .0 7 6

Besides the dung and offal of the hog, which must well defray the expense of attendance, risk, &c.

"Other statements of the like nature were sought for on the survey; but through the want of attention in ascertaining with correctness the lean weight of the animals before they were put up to fatten, and accurately stating the quantity and value of the feeding mess, render the various statements of little practical value, notwithstanding which the surveyor (*Vancouver*) gave it as his general opinion 'that the Berkshire, Suffolk, or Chinese breed, at an equal and proper age and condition, will lay on 10 lbs. of bacon for every bushel of barley, after grinding into meal, consumed by them.'"

It is unfortunate the preceding account is also vague respecting the bacon, whether it is valued as bacon *cured*, or merely cut up for salting; as swine's flesh loses from 5 to 10 per cent. in weight in curing, though weighed in the green, or undried and unsmoked state. I believe the cured meat is meant.

I have found that when pigs have been fed on the following articles, mixed, and calculated at the prices named, fresh pork can be raised for 4d. per pound, viz:—Indian (maize) meal at 28s. per 480 lbs.; barley at 32s. per quarter; peas and beans at 36s. ditto; and potatoes at 1s. 2d. per bushel of 70 lbs.; and that skim and butter milk is worth 1d. per gallon for feeding pigs, when mixed with barley-meal, potatoes and Indian meal. There are many substances—such as starch refuse, brewers' grains, distillers' wash and grains, &c., which, under particular circumstances, are used for feeding hogs; notwithstanding which such are out of the pale of ordinary agriculture. A singular mode of cooking potatoes for hogs is named in the Berkshire report, viz: baking them. In feeding hogs the following general rules should be particularly attended to:

Feed regularly, as abundance of food will not make up for the loss arising from irregular feeding. Pigs know their feeding-time very accurately, and nothing retards their feeding so much as allowing them to be pining and weakening for their anticipated regular meal. Also mix a little salt with their food; keep the troughs and animals clean, their sties and beds dry and warm. Vary the bill of fare; in doing so, however, be careful not to lower the general standard of the diet; hogs do much better when their food is varied. Stores, brood-sows and feeding-hogs should all be fed separately; two hogs will fatten better in company than separately.

Hogs do better on cooked than raw food. Some instructive experiments on this point are recorded in the Highland Transactions. I have seen some hogs of the improved large Irish breed feed to very great weights on *raw potatoes alone*—the flesh good and firm; these are, however, rare instances.

When the sow is suckling, she should have extra food; oatmeal, milk, and potatoes, or pea-meal, potatoes, and milk, are the best. At the time of farrowing she should be carefully watched, and the young ones removed; the placenta or after-birth ought also to be removed, otherwise she will devour it, and thus engender a morbid appetite, which may eventually cause her to devour her young. Abortion seldom

takes place with the sow; the symptoms of such are similar to those of approaching parturition, but more intense. When this is likely to take place, a veterinary surgeon, if within call, should be requested to attend. As a general rule, a sow ought not to be allowed to breed after she has entered her fifth year, nor boars after the seventh.

Swine are troubled with several diseases, the most common being a species of leprosy commonly known by the name of measles, which, and the other more serious diseases, would require a separate treatise to do justice to the subject.

In conclusion, it may be remarked, that swine-breeding might be carried on more profitably, and to a larger extent, were farmers to avail themselves of the facilities of railway communication which are now afforded, of either forwarding live pigs or as dead meat to Smithfield, Leadenhall, and Newgate salesmen, or by slaughtering bacon-hogs and converting the carcasses into ham and bacon, using the offal for home use. Many respectable salesmen in Newgate and Leadenhall would willingly take charge of small quantities, say 20, 40, or 100 sides, and would realise for the farmer, generally speaking, very remunerative prices; for this purpose, however, the sides or hams should be perfectly cured and dried, and invariably smoked.

It was intended to have concluded this paper with the immediately preceding observations. I am induced to continue these remarks, having found that my suspicions respecting the breed known as Lord Western's improved Essex were fully justified, as that nobleman, in a letter addressed to the late Earl Spencer, observes—

"To descend from the horse to the lowest animal in estimation, though perhaps not the least valuable, namely, the pig. It appears to me that an important change and improvement have already taken place in some districts in the breeds of this animal to a considerable extent, and which is further progressive in other parts of the country. This has been accomplished by a breed commonly called the Neapolitan, which race is found in its greatest purity in that beautiful peninsula, or rather tongue of land which lies between the bay of Naples and that of Salerno. It has very peculiar and valuable qualities; the flavour of the meat is excellent, I should say superior to that of any other breed, and the disposition of the animal to fatten on the smallest quantity of food is unrivalled. I have so completely engrafted this stock upon British breeds that I think my herd can scarcely be distinguished from the pure blood."

Long prior to the letter being written of which the above is an extract, Arthur Young, in describing a flock of Southdown sheep at Mr. Howard's, near Bury St. Edmunds, incidentally alludes to that gentleman's hogs, which are stated to have been obtained from Mr. Western. He (Arthur Young) states that they had considerable merit, and mentions one specimen, a fat sow that did not breed, as remarkable. This pig was—

1806.		lbs.
Nov. 22.	Put to barley-meal, live weight,	302
	1 bushel barley-meal.	
" 29.	1 " "	
Dec. 6.	1 " "	
" 13.	1 " "	
" 16.	Weighed alive,	364
" 20.	1 bushel barley-meal.	
" 27.	1 " " weighed alive,	380
1807.		
Jan. 10.	Weighed alive,	408

"	13.	1 bushel barley-meal.	
"	20.	1 " "	
Total	8	" "	
Jan. 27.	The day killed,	weighed alive,	443
"	"	" " dead,	328
		lbs.	lbs.
The four quarters,	299	Loose fat,	11
Head,	24	Pluck,	16
Fat,	5	Offal,	88
	328		443

Borrowing Tools.

It is an old saying that "he that goes borrowing, goes sorrowing;" and a still older one, "the borrower is servant to the lender." But so far as applies to farm tools, Yankee ingenuity seems to have reversed these sayings, for one of the greatest annoyances of some neighborhoods is the necessity of lending tools. "Won't you lend me your cart to-day?" "I want to borrow your crow bar." "Can't you let us have your drag?" "Father wants to get your oxen." "I want half a dozen of your new bags," &c., are usually followed by long searches for lost bags, half days spent in getting carts and harrows repaired, &c. "Why, father, Mr. Dumplin said he would pay for that cart if you would get it mended." "He would, indeed, would he,—this would cost him about one-fourth of my loss of time in going to him for it, and taking it to, and returning it from the blacksmith shop, to say nothing of three days delay in getting my work done?" "But, father, that's a great deal better than Mr. Sugarplum did when he borrowed our cultivator, for when he broke it, he swore at you behind your back for lending him such a 'rotten machine,' and wouldn't never pay a cent."

"John where's the crow bar?" "I don't know, sir, I've hunted for it a good deal for two or three days." "Have you looked in the barn?" "Yes, I hunted all through the barn, and the carriage house, and the corn house." "Have you asked Jim?" "Jim, haven't you seen the crow bar nowhere?" "Why, yes, I saw it at Squire Noodle's; he borrowed it one day when you was gone away, to pry up a barpost, and it's been stickin' there ever since."

Every farmer should have a full set of implements and tools, and have a place for every thing, and every thing in its place. If he has not the means, let him sell off a corner of his farm to procure them.—*Selected.*

FALSE SHAME.—Some people appear to be ashamed to have it known that they have to "work for a living." But they are not ashamed of the foolish pride that originates that shame, yet their pride is to them a greater disgrace than the greatest degree of virtuous poverty and honest labor. No greater evil could befall most young men and women than to be relieved of the necessity for labor, as the records of criminal courts, prisons and poor houses show. The chances are much greater that young men who are from necessity compelled to toil for a living will grow up and become respected members of society, than those who grow up in idleness, with a fortune at their disposal. While the former are engaged in earning a reputation and competency, the latter are scattering their substance in idleness and sloth.

Do not begin farming by building an expensive, house, or erect a spacious barn till you have something to store in it.

Selecting Breeding Rams.

It is the peculiar province of ram-breeders to breed stock rams for the use of common flock-breeders; and this mode of breeding has many advantages to both parties. The ram-breeder can afford to procure and put to his flock of ewes better animals, and, of course, more expensive ones than would answer the purpose of an ordinary breeder to use. In this way the ram-breeder is enabled to keep up a more select and valuable flock, from which he can let or sell animals of a truly valuable character to breeders for common use at a lower rate of prices; besides, it is also his peculiar province to look out for and introduce every practical improvement into his flock of which it is capable, by judicious selection from the flocks of other approved breeders, and in a great measure regardless of cost—the district depending upon him expects these things of him; and if he is a man of judgment he will not fail them. He knows, or ought to know, the pedigree of every animal of his flock; and in this way he can and does suit any change of blood or feature to the wants of the flock. In this way he can also suit his friends or customers desiring or finding it requisite to change their blood or intermingle it in their flock; by his peculiar flock-marks he can on application recommend this and the other animal as changes from the usual selection of his friends, thereby rendering it unnecessary for them to resort to other breeders, which is at all times a dubious course to adopt; it is far better to keep to a flock you well know, and to the judgment of a breeder on whom you can depend: the breeding will not be running too close by following this practice.

Breeders should be very cautious in selecting their rams. The requirements of their flock of ewes should be particularly noticed, and a careful separation of them made before hiring, so as to ascertain more accurately their precise defects, and to point out with greater certainty the peculiar kind of ram necessary to rectify these defects; this should be done before procuring the ram—not to hire first, and then try and suit the ewes to him afterwards. Never hire or purchase a ram from an unknown flock. *An inferior ram from a flock of well known repute will produce better stock than an accidental good one from an inferior flock.* By all means keep to a good strain; adhere to flocks of well known and deserved celebrity; you are far more certain as to the result. There may be, and often is, much foolish fastidiousness in breeders relative to slight peculiarities in good animals; a spot, slightly discoloured leg, or some little defect, is greatly magnified. These are of minor importance in good animals to common flock-breeders—they are important to ram-breeders, and are generally, if not universally, avoided; but no ordinary breeder need reject a good ram for a slight peculiarity; they will seldom be propagated in the flock, particularly if taken from a good stock.

Hiring and Sale.—It is always better for a breeder to hire a ram than to buy one, provided he is guaranteed a good season with him. Rams "nowadays" are so highly kept, so pampered, that vast numbers of them are very defective stock-getters. On this account it is better to hire than to buy. Shearling or yearling rams are undoubtedly the most active amongst the ewe flock, and are mostly sought after by flock-masters, but a good two-shear ram is to be preferred, if of known character. The shearling may prove right, and all you could wish; the two-shear ram is already proved; besides, his

proportions are developed, and you know to a certainty what he is as a sheep. Experienced ram-breeders will generally hire a two-shear or even older sheep on this footing; it must not with them be a matter of doubtful character, and an old sheep well proved is to them a certain security for future benefit.

A shearling ram is generally supposed to be fully equal to serve from 75 to 80 ewes; but a two-shear ram should not have more than 70 to 75. In all cases, the breeder hiring should see that his rams are in every respect right and active before putting them to his ewes; much disappointment and loss often arise from these omissions.

In making choice of a ram to suit the ewe flock regard should be had to every requirement; neither "wool nor mutton" ought to take precedence—both must be held of equal value. If any quality is to be discontinued, or of necessity to be given up for the time, let it be beauty or symmetry, or some minor points; these are truly good in their place; but for these never give up the main qualifications—a good fleece, a fat back, and a full symmetrical proportion, of great substance.

In making choice of the ewes to put to each ram, much may be done to improve the flock. No breeder can find just the ram he wants—the very ram to suit his whole flock; he must therefore have the same due regard to what he most requires, and put his ewes to them accordingly. A "ram-breeder" will very properly put his choice ewes to the best ram, in order to obtain the best offspring; but a "common breeder" may vary his ewes as to procure his flock of like make and proportions—a short-legged ram to a long-legged ewe; a full-chested ram to a narrow-chested ewe; a heavy woolled ram to a light-woolled ewe; and so on as his best judgment dictates endeavoring to obtain from the male what is wanting in the female.

In breeding what are termed half-breeds great care should be given to obtain rams from good flocks, or the end to be answered in making such stock quickly off is defeated. The very best of rams should be used, possessing every good qualification of wool, mutton, and symmetry. It is quite a mistake to fancy any ram will do for half-breeds; no such thing. We know of half-bred sheep remaining as long or longer on fattening pastures than many much heavier and less likely feeding-sheep. If half-bred sheep are to retain favor with the grazier, they must be bred with every care and attention to the many qualifications. Many breeders use ram lambs for this purpose; this is wrong, no breeder can tell what a lamb is to make in his future life. In all cases, use the best ram or the best kind of ram you can obtain, and be not too nice about the price. I have known many flocks of lambs make from 3s. 6d. to 7s. per head more than others of the like size, solely from better and more correct breeding; and the difference is far greater as they grow up, and are fattened.—*Farmer's Magazine.*

ALTHOUGH in draining land thoroughly, your purse may be drained, yet the full crops that follow, will soon fill it up again.

FRUITS.—The Wheeling Gazette states apples and other fall fruit and vegetables, are now being sent in large quantities, from that city over the Baltimore and Ohio railroad to New York. Apples go at the rate of 500 barrels a day. They are worth \$1 75 at Wheeling, and \$3 in New York.

Thorne's Importations of Durhams and South-downs.

We extract the following interesting letter from the Cultivator, concerning these late importations into New York. It is cause of general congratulation all over the country, that "Grand Duke," costing \$5000 in England, and probably the finest Durham bull ever brought to this country, is safely landed after a most hazardous voyage. To the great liberality and public spirit of J. Thorne, in investing so much in these superior animals and bringing them to our shores, the whole country is under lasting obligations. The prices paid were within the reach of but few, and the patriotic feeling which prompted the effort to secure them for our own country, without regard to cost, is worthy of all praise. The possession of these choice animals will enable us to turn the current of trade and export to, instead of importing from England. We feel more anxiety to see and handle "Grand Duke," than to visit the Crystal Palace:

RESPECTED FRIEND—I now have on my farm, some choice Short-horns and South Down sheep of my own importation. To give thee some idea of the stock I am about importing, I take the liberty of adding some particulars relating to it, and some extracts from letters I have received from FRANCIS M. ROTCH of Morris, Otsego county, who, as thee may know, is now in England, making selections of stock for me.

In addition to the South Down buck, (1½) secured at JONAS WEBB's Letting, 11th July, at 130 guineas, and the two pens of prize yearling South Down ewes, shown before the Royal Agricultural Society of England, by Mr. LUGAR, Mr. Rotch selected from Mr. Webb's flock, fifteen yearling ewes and five older ones (the latter as an especial favor.) He has subsequently added the first prize pen of yearling South Down ewes, shown at the York (England) Agricultural Fair, by Lord WALSHINGHAM. Mr. Rotch remarks of them—"I was really tempted to take them. They are a beautiful lot."

In connection with the ewes purchased of Mr. Lugar, Mr. Rotch says—"It is to be remarked that Mr. L. is the only breeder, with one exception, who has succeeded in winning both the first and second prizes, with yearling South Down ewes at the Royal Agricultural Society's Fairs. A breeder who can win with ten of his ewes, ought certainly to stand higher than the one who wins with only five. Mr. L. was my competitor at Mr. Webb's, for the buck, (1½)."

Of Short-Horns, Mr. Rotch writes—"The Bates' bull, Grand Duke, (10,284) is a superb animal, and to my thinking the best in England; his handling cannot be surpassed. He is a true Duchess bull, with all their character and quality." Subsequently he writes—"I have purchased the Bates' bull, Grand Duke, decidedly the best bull in the world! at the long price of 1000 guineas. He looks every inch a Bates, and is grand in size and appearance, with a majestic carriage." Grand Duke was purchased of S. E. BOLDEN.

Mr. Rotch also purchased of Mr. Bolden, at 100 guineas, "Peri," a roan yearling heifer by Grand Duke—dam, Pink, by 2d Duke of York (5959)—grand dam, Marygold, by Raspberry, (4875) &c.

"You will see she has two crosses of the Duchess blood; then she goes to Booth's Raspberry, he being the sire of his famous cow Faith, mother of Hope, and she of Charity, his prize cow, thus going back to his best blood."

From Mr. TANQUERAY he purchased "Aurora," a two-year old heifer, at 150 guineas. In speaking of her before making the purchase, he says—"I think Mr. Tanqueray's heifer, Aurora, by 3d Duke of York, one of the most desirable animals; she looks very like a Duchess."

From Mr. TOWNELY he has secured two heifers, "Frederica" his choicest, two years old, at 300 guineas; color red—sire, Upstart; dam, Feathers, by Duke of Cornwall, &c. She is far advanced in gestation, and was only shown at the York fair this season, where she was a winner. "Llalah Rookh," his choicest yearling, at 400 guineas; color red—sire, The Squire; dam by Prince Earnest, &c. This heifer was winner of the first prize at both the York (England) and the Irish shows, the only two at which she was shown this year. Mr. Rotch says—"Her pedigree is full of winners, and she is undoubtedly the most beautiful creature in England." In speaking of prices he adds—"Mr. Townely frankly told me I had asked for their best animals; that they did not wish to sell, and nothing but an enormous price would tempt them."

At the late Earl Ducie's sale, thee is aware of his purchase of Duchess 59, roan, 5 years old, dam Duchess 56, at 350 guineas.

Duchess 64, red, 4 years old, dam Duchess 55, at 600 "

Duchess 68, red, 11 months calf, dam Duchess 64, at 300 "

In speaking of this sale, Mr. Rotch remarks—"There was a large gathering of about three thousand persons. The average price of the animals sold, was double that at Bates' sale! I think I could have taken 300 guineas for my bargain before I left the ground! Mr. Bolden was besieged by several bidders, to send cows to Grand Duke, but put the price up to one hundred guineas a cow—on your account, of course!"

Mr. Rotch was disappointed in not getting Duchess 66, (her dam Duchess 55,) which MORRIS & BAKER were fortunate in securing at 700 guineas. Had Mr. R. secured this Duchess, it would have given me all the Duchess cows Earl Ducie left, that have bred of late years.

The buck (1½) and a part of the ewes have come to hand, and fully answer my most sanguine expectations. They are doing finely. The balance of the stock I do not expect until about the first November. Very respectfully, JONATHAN THORNE. Washington Hollow, Duchess co., N. Y., 9 mo. 28, 1853.

TO MAKE YELLOW BUTTER IN WINTER.—Put in yolk of eggs just before the butter comes, near the termination of the churning. This has been repeatedly tried, and it makes very fine sweet butter. It is kept by many as a great secret, but its great value requires publicity.

TO CURE POLL EVIL IN HORSES.—Mix copperas and hogs lard, and simmer over the fire in an iron pot; with this rub the part affected plentifully two or three times a week and let the hot sun drive it in. The application should be made before the disease has gone too far. Mind to keep rubbing till a cure is effected: it takes time.

Fencing in Pennsylvania.

We are reminded of this important item of farm expenses by a recent article in the Boston Cultivator, which copies some statistics on the subject from an address by Nicholas Biddle, some years ago, before the Philadelphia Agricultural Society. We recollect being present when this address was delivered. The portion of it relative to the cost of fencing excited considerable attention at the time among the farmers, and is as appropriate, if not more so, now. It says:

"But the most serious grievance in our farming, and one to which I ask your special attention, is our very bad system of fencing. When the country was first settled, it was natural in felling the timber, to enclose with the logs the clearing, just as in New England, the stones on a farm may be as well formed into a fence, as carried further. But as wood became scarcer, the expense has increased, till now it has become a real oppression. I have heard of a farm surrounded by a cedar fence, which would actually sell at auction for more than the farm itself. A most respectable member of our society has assured me that the fencing of his farm, of perhaps 300 acres, cost him 5,000 dollars. The extent of this burthen in Pennsylvania will surprise you all, as it astonished me when I came to make this calculation, which is of course very rough, but as I give the elements of it, you must rectify its errors.

The whole surface of Pennsylvania is said to be 28,000,000 of acres. Deduct for unenclosed lands, what seems to be a large allowance, say 18,000,000, and there remain enclosed in a post and rail fence, 10,000,000. The size of the lots into which they are subdivided, varies; near large cities and towns, the lots are of a very few acres—in remoter places they are larger, but for convenience I have assumed as a basis of calculation, that the sub-divisions of a Pennsylvania farm are on an average about 10 acres.

Now, to enclose a field of ten acres, you have on each side 660 feet, and calling a panel 10 feet, you have 66 panels on each side, or 264 panels to go round the whole—but as every panel serves for an enclosure on each side, the number of panels should be reduced of course to one-half; so that, upon a large scale of enclosure, every 10 acres requires 132 panels of fence. Now 10,000,000 of acres, thus divided into fields of 10 acres, amount to 1,000,000 fields, each of which requiring 132 panels, the whole amount of panels is 132,000,000. The price of a panel varies in different parts of the State; here it would cost one dollar a panel, but taking the average at eighty cents a panel, we have \$105,600,000, or in round numbers, \$100,000,000. Consider now the interest on this outlay, the wear and tear of the fence, and that the whole of it will not last more than 10 or 15 years, and you have as the annual tax upon agriculture in Pennsylvania, the sum of 10,000,000 of dollars. If this estimate appears still too high, reduce it one-half, and you have still a tax of \$5,000,000.

Look at it in another point of view. See how many post roads, private roads and lanes there are, with a row of fences on each side—see how every farm is cut up into little divisions of a few acres—and the result will not vary much from what I have stated. They say that every man's house is his castle—one would think every man's farm was his fortification, so cut up is it with these piles of logs, like so many

entrenchments. Indeed, the best use of a fence that I know, is that at the battle of Bunker Hill; the farmer-warriors brought two fences together, and filled the interval with new hay, as an impromptu rampart. But in times of peace they are absolute nuisances."

York County Exhibition.

From what we recently heard of this exhibition, it appears to have surpassed most others in Pennsylvania the present season, not only in the large attendance of 12 to 15,000 people, but in the number, variety, and excellent quality of the stock, implements and productions, which numbered over fifteen hundred entries.

No intoxicating drink was allowed on the ground, and consequently there was no drunkenness, broils or confusion. Between one and two hundred horses and mules, many of them very fine animals, were exhibited. In cattle, sheep and swine, the specimens were very good, although not numerous, but including some very fine thorough bred Durhams from the herd of John Evan's, Esq., the president of the society, which were not entered for competition. An Ayrshire bull from John Merryman, Esq., of Baltimore, received the first premium. Several of the contributors were from that state.

Of some other departments the York Advocate says:

The exhibition of poultry was exceedingly large, and attracted much attention; the coops were nearly all the time surrounded by hundreds of persons. Every breed that has ever been heard of, we believe, was represented. Shanghai, Chittagong, Dorking, Cochinchina, Brama Pootra, Chinese Silk, Frizzle, Game, Bantam; also, Geese, Turkeys, Ducks, Pigeons, &c., &c.

The display of Agricultural and Mechanical implements was very good, embracing Mowers, Reapers, Cutters, &c., and some new Machines for farming and mechanical purposes.

Vegetables of all kinds, and in large quantities, and some of monstrous size, occupied a prominent position. Fruits in great abundance, fresh from the trees and vines, and cakes and candies, magnificently gotten up, delighted the eye and tempted the taste of every looker on.

Of the Carpets, Quilts, Ornamental Needle Work, &c., the display was full and highly interesting combining the useful with the beautiful.

The display of Stoves, Saddlery, Boots, Hats, Flour, Butter, Honey, &c., was large and handsomely arranged. Inasmuch as the report of the Judges will be published, we refrain from noticing any animal or article particularly.

On Friday the 7th, *The Plowing Match* took place, in a field near to the Fair ground. Three teams were entered, but only two appeared on the ground, Mr. Peter, of York township, and Mr. Thomas Emmitt, of this Borough. The Plowing was pretty well done considering the ground, and the circumstances attending it. This is yet rather a novelty in York county, and all that is necessary, is only the opportunity of a few such trials, to bring the farmers of old York up to their proper mark in this department.

At the close of the plowing match, the people gath-

ered around the speaker's stand, when an address was delivered by the Hon. Alex. L. Hayes, of Lancaster City. Like all that proceeds from his pen, the address was full of good, sound practical sense, full of "words fitly spoken." His manner was pleasing, and his words distinct, and his manifest faith in the doctrines he so well promulgated, and so aptly illustrated, held that large assembly, for an hour, deeply interested.

We should be much pleased to have a copy of this address.—ED.

Cure for the Potato Rot.

In a recent conversation with Mr. JOHN BARRETT, Jr., of Cayuga Bridge, on the subject of the potato disease, he informed us that he had not been troubled with the rot for some years, and that there was an easy remedy for it, which all might apply with very little trouble or expense. On inquiring for this simple remedy, we expected to have been told that it was a *secret*, to be revealed only to those who were willing to contribute a handsome reward to the discoverer. But Mr. B. freely gave us his experience, which we as freely impart to our readers, leaving it to them to make the experiment, if they think proper.

Mr. Barrett stated that a few years since, he, as well as most of his neighbors, lost their entire crop of potatoes by the rot—that the next spring he was compelled to go to another town for seed, where he procured a supply for himself and an adjoining neighbor, and where he was told how to prevent the disease. He said he and his neighbor planted the seed he procured on adjoining fields—the soil and treatment similar—only that Mr. B. applied the remedy recommended to him—which consisted in sowing *ashes* over the field once a week for six weeks, commencing shortly after the second hoeing of the crop. He used from two to three bushels of ashes per acre, which is sufficient to give the potato-tops a good dusting. The result was that his field was entirely free from the disease, while the potatoes on the adjoining field, without this application of ashes, rotted badly. Since then, Mr. B., as well as most of his neighbors, had applied ashes, and had been entirely free from the disease.—*Country Gentleman*.

HOW TO KEEP SMOKED HAMS.—A writer in the Farmer's Companion, published at Detroit, states that he has for many years preserved his hams, through the summer, in the most perfect condition, by packing them in barrels, with layers of corn-cobs between them, so that the hams would not come in contact with each other. They should be taken out and rubbed dry once during the summer. The cask should be placed on a bench or trussel, in a cool, dry cellar.

Fattening Sheep.

It is sometimes an object to fatten sheep rapidly in summer, and also to fatten off old sheep which cannot be readily fattened on pasture alone. In either case, good pasture and the feeding of a moderate quantity of grain daily, will generally effect it very advantageously. One bushel of grain fed to sheep in summer, will make as much fat as three or four fed in winter; hence they may be fattened off most rapidly and with least expense in summer and fall.—*Canfield*.

A man behind the times should be fed on *ketchup*.

Mr. Thorne's Imported Stock.

We much regret to have to record the following mishaps, to some of the high priced stock lately purchased in England, while on their voyage to the United States in the Steamer *Herman*. The article is from the "American Agriculturist." It says.

The steamer *Herman* sailed from Southampton on the 12th October, and arrived here on the 29th, with most of Mr. Thorne's late purchases of Short-horn cattle in England, and the remainder of his South-down sheep. The cattle put on board were the Duchess hull *Grand Duke*, *Duchess 59th*, bred by the late Mr. Thomas Bates; *Duchess 68th*, *Frederica*, and *Lallah Rookh*, bought of Mr. Townley; *Mystery* and *Aurora*, from Mr. Tanqueray; *Pert*, from Mr. Bolden; and *Darling*, of Capt. Dilks. Seven prize South-down sheep, purchased of Lord Walsingham, were also put on board, two of which were for Mr. Francis Retch, of Otsego, N. Y.

The *Hermann* had a succession of heavy gales during her whole passage. On the third day out the sheep-house was stove in, and three of these precious animals were killed. On the eighth day out she encountered the most furious storm she ever experienced. About midnight the cattle houses were carried away, and the animals strewed in every direction over the deck, where, on account of the severity of the gale, they had to remain till morning. *Duchess 68th* was killed outright by the breaking of a mast, the others miraculously escaped without material injury. *Grand Duke* did not receive a single scratch.

We made a hasty inspection of the above animals after landing. Of course they showed to great disadvantage, after such a rough voyage, and we shall reserve giving our opinion fully till we can see them under more favorable circumstances. But this much we can say now, that *Grand Duke* was well named, for a grand bull he really is. His head, eye, and horn are particularly fine; and so far as we can now judge, all his other points may well challenge admiration. His color is beautiful, mostly a deep, rich red, with a fine yellow skin. *Duchess 59th* is too much out of condition to show advantageously, but she seems a superb cow. The Townley heifers are most extraordinary; such fine heads and eyes, and such briskets, it strikes us now that we have never met out of Mr. Bates' yard. We shall speak of the other heifers more particularly hereafter. Suffice it to say that they are well worthy of importation.

The sheep are superb, one of the ewes we have no recollection of ever having seen surpassed.

Great credit is due to Mr. Retch for his selections, and we can well sympathize with him in his care and anxiety in selecting the above choice animals. As we are about going to press, we can say no more at this moment. For some account of the character of this stock and the prices paid for it, we would refer to number six, page 82, of this journal. *Duchess 64th*, having calved just before the steamer sailed, she was left to follow hereafter.

Mr. Dulany, of Virginia, put on board ten South-down sheep, selected from the flock of Mr. Webb, three of these were also killed when the sheep-house was stove in. *Duchess 68th* was eleven months old, and cost Mr. Thorne 300 guineas—\$1500 of our money. It is not the money, however, that Mr. T. regrets at all, but the loss to his country of so high bred and valuable an animal. Those who have not tried it, little know the danger and expense incurred in importing stock; every good animal arriving here should therefore be the more highly prized.



Grave's Patent Corn Sheller.

The above cut represents a new Patent Corn Sheller which has lately been exhibited to us, rather novel in construction, and from its cheapness and simplicity, seems well adapted for the farmer, who cultivates on a small scale. The owner represents it as capable of shelling with ease 5 to 6 bushels an hour, worked by a single person. It is operated by the foot, deposits the cobs on one side, and the corn on the other. The latter we observed to be as entirely clean as if run through the fan. It occupies very little room. The patent seems to consist in forcing the ears separately, between a set of shelling plates, while at the same time they are twisted on their axis.

The engraving represents a table to which the corn shelling apparatus is secured and supported by four legs. The shelling plates are four in number, and arranged in pairs at right angles to each other, and pivoted at their lower extremities, one pair is smaller than the others, which lap over it, and is acted upon by springs, which thus force the upper edges of all four plates to approach each other. The shelling plates are inclosed in an inverted conical case, which prevents the scattering of the shelled corn. A cross bar is supported above the shelling plates, by two rods, which passing through the table, are secured to a cross bar beneath to which motion is imparted by the spring treadle, secured to the base board. The opposite extremities of the upper cross bar, are furnished with pins, which are guided in curved grooves, secured to a pair of upright standards, projected from the upper edge of the case. The lower cross bar is

slightly hollowed, at its middle and is fitted with a sharp iron. The ear of corn to be shelled, is inserted edgewise between upper edges of the shelling plates, and the lower face of the cross bar above them; the foot of the operator is then applied to depress the treadle, and thus force the ear between the shelling edges; the latter are pressed towards each other by the springs, with sufficient force to remove the grains but not to enter the cob. As the cross bar descends, it is turned by the action of the curved guides,—grooves, thus twisting the ear, and greatly facilitating the action of the shelling plates. As fast as one ear is forced down, the pressure of the foot is relaxed, and the spring of the treadle throws up the cross bar, to receive a second ear, which expels the cob of the first, from between the shelling plates. The shelled corn is collected by the case, from which it falls, through openings, made in the table into suitable receptacles.

Price of this machine is only \$5—Patent rights are offered for sale, of most of the counties in Pennsylvania. Address B. Pilkington, and A. S. Rowland, Jacksonville, Illinois, sole proprietors.

COLIC IN HORSES.—A Tennessee correspondent says:—The best remedy that I have tried for colic in horses is, one pint of whiskey and two-thirds of a teacup of gunpowder. Mix well and drench the horse. In ordinary cases the horse will be well in half an hour.

If you would teach secrecy to others, begin with yourself. How can you expect another will keep your secret when you cannot yourself.

For the Penoa. Farm Journal.

**The past, present, and prospective prices of Land-
ed property.**

MESSRS. EDITORS:—Being a constant reader of the Farm Journal since the first number, and having observed the increasing attention and ability infused into its columns as it progresses, and its consequent accumulating value to practical Agriculturists, I beg permission to express my gratification that a journal devoted especially to this subject has found genial elements amongst my fellow farmers to justify the increased expenses necessarily incurred in raising it from its comparatively small beginning to its present apparently highly prosperous condition, creditable alike to its spirited conductors, and to the discernment of the agricultural community in which it at present flourishes.

In every department of business connected with the occupation of a farmer, its columns teem with interest and instruction, which I am well assured is not lost upon those concerned. Amongst the reliable proofs to this happy effect is the fact, that many feel emboldened to convey through your columns for the benefit of others, the result of their own experience, or their settled convictions on questions of admitted importance, expecting and even courting discussion even if the bases upon which their conclusions have been founded should crumble under the operation. Of this latter character may be considered the following remarks, submitted to the consideration of farmers under the impression that many have not given the subject the attention that its bearing on their particular interest demands. I allude to the past, the present, and the prospective aspect of Agricultural investments and the causes which have, and probably will continue to affect them.

The great and suddenly increased price of farm land since the commencement of the present year has taken our farming community by surprise. And not a few are disposed to take advantage of what appears when connected with former experience, to be a transient speculative value, to subside to its former level in the course of a few months or at farthest in a year or two; by offering their property for sale. All farm produce has been similarly effected to a greater or less extent, and a disposition is very generally manifested to convert it at once into money at its present saleable price, least the usual diminution in value may commence with the articles yet unsold.

That the cause of the recent advance of prices is not due to diminished production must be apparent upon a slight examination of the subject, and that it is not due to increased consumption beyond the usual increase of supply is equally clear, from the fact that the quantity exported beyond the limits of our country has not been materially increased since the commencement of the rise. To some other causes, then, it must be attributed, and questions of interest

to the farmer are, to what cause must it be ascribed? And will that cause operate transiently or permanently? Will it remain stationary or be progressive? Due examination it is believed will lead to the conclusion that the present prices generally will prove to be permanent—or even progressive to an extent not easily foreseen, and a relapse to their former money price improbable if not impossible, for the following reasons, 1st, from the increase and still increasing quantity of gold in the world's currency, and its necessary diminution in value, 2nd, from the legal debasement of the standard of silver coin by the Government to meet the diminishing value of gold, and 3rdly (though not permanently) from the prospective increased demand for agricultural products to supply the deficiency alledged in the present crops of Western Europe, stimulated by the prospect of an extensive continental war.

With respect to gold it must be borne in mind that the amount in value produced from our own mines since the beginning of 1850 has reached the enormous sum of over two hundred millions of dollars, one half of which has remained in the country to swell the currency already large before the balance passing to English hands principally, has, with the amount received from their own colonial mines during the last two years, created a redundancy there also, perhaps as great in proportion to the business of the country as that experienced here. The mines of Russia also have been producing about fifty million dollars worth annually since 1845. The rates of production from the three sources named, will probably from present prospects, continue for an indefinite number of years. From these data it is not unreasonable to infer that the recent predictions, that in ten years from this time the metallic currency of the world will be double that of the year 1850, will be fully realized.

It was early discovered here that the quantity of gold had diminished the commercial value below its legal value in current coin, while silver in quantity and legal value remained stationary and commanded a premium in gold standard coin, increasing inversely as the value of gold diminished, and their circulation together at their legal values respectively became impossible. Silver mainly disappeared from circulation and from the country. To correct this discrepancy an unwise Congress deemed it good policy during the sessions of 1852-3 to equalize the standard value of coin of both metals, not by requiring an increased quantity of gold in the several coins of that metal, but by diminishing the quantity of silver in the dollar, and its fractional parts, to the required extent, (the extent of diminution I gather from the public prints at the time amounted to 29 grains from 213 gr. formerly contained in the dollar but not having seen the act I cannot speak positively) said to be nearly 14 per cent, and continuing it as a legal ten-

der at its former. This amount of debasement whatever it be, will measure precisely the extent of the depreciation of our currency at the time of the passage of the act. A further accumulation of gold from year to year will require a corresponding debasement of silver coin to meet its diminishing value, until, if continued a few years, pure silver and gold will become of equal value for equal weights or in other terms, our standard dollar in either metal will be worth about one sixteenth of their value in 1850. This may be an extreme that will never be realized, but to whatever extent it may progress, in precisely the same ratio must the *price* of all saleable commodities advance to maintain the real value in that year.

It will be observed, if these premises be correct, that a portion of the late increase in the price of farm land and its products is owing to an increase in the *quantity* of our metallic currency, and a further influence has been exerted by a debasement of the currency, by which their relative value is measured. These two causes, to whatever extent they have or may effect the saleable value of commodities may be considered permanently in action and their intensity to increase progressively so long as the production of gold in all nations maintains its present rate of accumulation.

The increase of demand and consequent advance of price for breadstuffs for European consumption, will probably be very considerable, independent of the fluctuations in value and amount of the circulating currency, which has been equally felt there as in this country. All Western Europe has given evidence by acts of their several Governments but seldom resorted to, for the encouragement of the importation of foreign grain, that the crops in all the maritime countries on the west of that continent have been unusually short of the amount required for local consumption. Their usual sources of supply have been Russia and the United States, when such deficiency has occurred, and even under ordinary circumstances of failure, we might anticipate a rise of fifty per cent in the prices of wheat and indian corn, the prospect at present is that the whole deficiency must be drawn from the United States alone, in consequence of a probable state of war preventing the grain from Russia finding its way into any of the countries requiring it.

In view of these considerations and prospective forebodings which to some extent have been already realized and to a much greater extent are almost certain to be so, it is respectfully suggested that wisdom and prudence would counsel our farmers to consider thoroughly the consequence to their interests to result from disposing of their lands or other permanent property—under the prospects before us, even at the present comparatively high and tempting prices. The fluctuation of the currency either in value or quantity will not effect the *real value of property* either advantageously or adversely, and all whose means

are thus invested, will, with common prudence and forecast, pass unharmed through the ordeal; not so, however, with those whose dependance and means are on money in any form, at interest or otherwise, the whole weight of ultimate loss will fall on the latter exclusively. A single exemplification of this position will serve to illustrate the object arrived at in the foregoing discussion.

Upon the supposition that a certain property would have commanded in 1850 a price of ten thousand dollars, and at this time thirteen thousand dollars could be obtained for it, and that in 1856 sixteen thousand dollars will measure its value, it would follow that the property had been improved to the extent of three thousand dollars in 1853 and six thousand dollars in 1856, or that sixteen thousand dollars in 1856 was of no greater value than thirteen thousand in 1853 or ten thousand dollars in 1850. The latter is the true state of the case: the holder of the property maintains his interest like a cork floating on a rising surface, while the money owner has suffered the loss of depreciation in its value. Transactions of every day occurrence will justify this parallel to the letter.

Middletown, Del. co.

J. E.

For the Farm Journal.

Osier Willow.

The attention of Horticulturists in this county, has recently been called to the probable advantages of the culture of several new crops, among which the willow seems most prominent. Several rewards are offered, by a member of the society to the most successful cultivator. Hence there is much inquiry as to the most suitable soil, variety of willow and manner of propagation and culture. It would seem, by the dearth of experimental facts, in Agricultural and Horticultural works, to be a comparatively new business.

For these reasons it is thought expedient to give, from the best European authorities the method practised there according to Loudon, than whom, no writer has condensed more important information on this and kindred subjects.

To his *Arboretum et Fruticetum Britannicum*,—a work not in the society's Library; consequently not easily accessible to its members,—we are indebted for most of the following information.

It is pleasant to state, that the subject is not entirely new to all the members of our society. Fine prepared osiers and their manufacture were exhibited last September, by one of our members. From him much valuable information may be obtained. His investigations and he has availed himself of all practical facts within his reach, led him to adopt the common willow, so extensively cultivated near Wilmington and in this county, for the manufacture of charcoal for gunpowder. Its quality for basket-ma-

king is improved by each succeeding cutting until the third. The common yellow willow, (*salix vitellina*) would no doubt be equally improved by frequent cutting. It is certainly tougher than the former under ordinary circumstances. A variety grown here for five years, probably the *S. Forbyana*, appears well adapted for the purpose, producing slender, branchless shoots ten feet long in a season. Persons desirous of testing different varieties can have cuttings gratuitously.

"Almost all the species of willows may be grown or this purpose; but some are greatly preferable to others. The most vigorous growing is unquestionably, *S. viminalis*; and it is the sort most generally cultivated for basket making. It has no disadvantage except that in cold wet seasons and in moist soil it does not always ripen the points of its shoots. *S. rubra*, *S. forbyana*, *S. decipiens* and *S. stipularis* are excellent species of less vigorous growth than *S. viminalis*. The best of these is perhaps *S. forbyana*. These we consider as by far the most valuable. The soil for basket willow ought to be deep, well drained, and thoroughly prepared; and the situation ought to be low, level, and naturally moist; and if there is a command of water for irrigation so much the better." Sang observes "there are few soils that will not bear willows; yet some situations are very unfit for them. Dry and exposed grounds, peat, moss and land covered with standing water, or a quagmire are not at all suitable. Hollows, the soil of which is composed of rich, soft, earthy particles, and which can be laid dry, are the most eligible for converting into osiers; and if such can be occasionally soaked with water during the dry months of summer, the situation may be considered perfect. Completely draining the site of a basket willow plantation is the first step towards its formation, and the foundation of its prosperity, and, consequently, of the profit to be derived from it. The drains ought to be open or built on the sides and covered over with flags to prevent their being choked up with the roots. In no case should a plantation of willows be attempted but in prepared ground except perhaps, where a few rows may be introduced upon the brink of a river or on the tops of the banks of ditches. Having fixed upon the spot and also having carefully prepared the ground the next step is to procure the plants. These should be of the last years wood, taken from the under end of well-ripened shoots of good size, and they should be in length of 1 foot. Every vigorous shoot will afford two or three plants. The distances at which osiers for baskets ought to be planted are 18 inches between the rows and 12 inches apart in the rows. This distance will not be too thick for at least five or six years; but after that period every alternate plant should be removed. Osier plantations must be carefully hoed and cleaned every year. When the shoots become too numerous they should be careful-

ly thinned out, and also cut down, leaving only an eye or two at the bottom of each, until they be diminished to such a number as the stool is capable of supporting with vigor throughout the season. A basket maker finds more service from one shoot of 6 or 8 feet in length than from four of 3 feet in length and one of the first dimensions will not exhaust the stool or the land so much as four of the others. The proper season for thinning the stools is from the 1st of March to the middle of April.

The shoots should not be cut till the second autumn after planting; for by being allowed to remain uncut such a length of time, the stocks become stronger and more able to produce a good crop."

Should this meet the approbation of editors and readers of the Journal it will be followed from the same authorities by *The operation of Cutting, Peeling, &c.*

In my last communication you have materially enlarged the circumference of my pea stalk. It wants a period before 23. (Twenty-three hundredths) of a foot.

Glenisle, Nov. 7th, 1853.

J. K. E.

For the Farm Journal.

Mr. Prince's Letter on the Strawberry Question.

DEAR SIR:—When from three plants of McAvoy's Extra Red Strawberry received direct from the raiser, I produced a whole progeny, having on each plant separate spikes of pistillate and hermaphrodite blossoms, and I sent you one for verification, an individual came forward and taunted both you and me with gross ignorance in not knowing that it was a characteristic of "that, and a dozen other varieties." When that individual subsequently comes forward in your October number, and labors hard, and quotes "Mr. McAvoy" and "fifty dollars" to prove that that same strawberry has *no such characters*; when *such* an individual occupies six whole columns solely to make out the *inconsistency*, &c., of his opponent, truly, as you say, it is time to stop.

Of what value is all this dogmatic declamation? What, sir, if you tell a gentleman that you keep your hens beyond the attractions of their male companions, as you have already told him a similar thing about osage oranges, figs, and so on, and that they yet lay you eggs in abundance "good enough to eat,"—what, I ask, would it signify that he answer you, on the strength of "his long experience," that "it is utterly impossible?"

And what if, in like manner, Mr. Barry and others tell the same gentleman, that they can raise strawberries, "good enough to eat," though by no means perfect, from plants out of the reach of staminate influence. What signifies an "utterly impossible" or a "thousand dollars" to the contrary?

And if, sir, Mr. Forbes in the *Salicetum Woburniensis*, figures a specimen of *Salix Croweana*, and describes it as having "barren catkins which have the

remarkable peculiarity of changing into *fertile* ones," and states that he has watched the progressive change of the filaments to pistils,—what signifies it that a gentleman from Flushing dares W. D. to offer an instance of the kind?

And when, in Smith's "English Flora," Mr. Borrer observes that the same phenomena occurs in *Salix Oleifolia*, and Mr. Gee the same in *S. Cineria*,—what effect would it have on the fact if the same gentleman were to express his religiously worded sentiments on our having found "what he considers a "God-send," to help us?"

And supposing I point to a plant growing in our garden—allied to the strawberry—the *Rubus Odoratus*, never producing a berry there, nor, I believe, in any other garden, and then refer to respectable botanical authors for the fact that it formed berries perfectly in its native mountains when out of the reach of cultivation,—what then if "somebody" or "nobody" did "declare" that "nature's laws were immutable," and so the fact, so called, could not be?

And, again, about this "immutable law," what if we find in the Quarterly Review for 1852, that Sir W. J. Hooker comes forward and says that there is a plant in their collection, named by Smith *Calebo-gyne Illeifolia*, which bears perfect seeds thousands of miles beyond the reach of "staminate influence," what then if even the same gentleman from Flushing should pronounce the assertion of the fact to be akin to blasphemy?

And if, Mr. Editor, any man were to be "dumb" enough to assert that a pistillate flower, once formed or in blossom, could, *after that*, be made to become a hermaphrodite one,—would there not, *then*, be some analogy between that chaste figure of speech, that "turning of a cow into a bull," and that proposition,—but as no one has made such an assertion, may not analogy, as well as "poetry," become "foolery?"

And, as it seems so fashionable to draw supposed analogies from the animal kingdom, is it not a fact known to every agricultural stock breeder worthy of the name, that they have it in their power to regulate the sexes of the animals, they may raise to a considerable extent, and can only not do so entirely through not knowing enough of this "immutable law," about which another seems to know so much? Have the experiments recorded long ago, in volumes 37 and 38 of the *Annals de l'Agriculture Francaise*, as having been made by M. Girou de Buzarienguez, by which he was enabled to raise as many females in proportion to males in a flock of ewes, as any one might suggest,—have these facts ever been controverted? or rather has not every year more fully confirmed the fact, that the "immutable law" which regulates these things is comprised of external circumstances, which may become "perfectly under our control?"

Indeed, sir, were your Journal a medical one I could allude to the discoveries of modern physiologists, by which it would appear that the mere "turn of a straw" prevented Mr. Prince himself from being, perhaps, Mrs. Partington.

If we want to argue this question scientifically, we must use language accurately, and in that event there is no such thing, *actually*, as "pistillate" or "hermaphrodite plants." They merely *bear pistillate* or *hermaphrodite flowers*, and until the flowers or the rudiments of their separate organs are formed, they are under the laws which regulate the production or development of either the one or the other. Once formed the sexes are, of course, "immutable."

And now what becomes of all this talk about "immutability" and all that? It shows that men talk about these things as if they knew every iota of the process; when, if "wisdom were not extinct," with Socrates, they would confess they knew comparatively nothing; and it teaches all of us that we have many things to learn, and that there are many things hard to be understood, which we shall better come at by a brotherly walking forward hand in hand in the search, than by sitting down in a ditch, and by the strength of our lungs, if not by the solidity of our judgment, turn those away from the search after nature's truths, who would "follow her through all her secret paths."

THOMAS MEEHAN.

Domestic Receipts.

GINGER CUP CAKE.—3 cups of flour, 1 of sugar, 1 of molasses, 1 of butter, table spoonful of ginger, 1 tea spoonful of saleratus and 3 eggs, bake in pans. A pound of stoned and chopped raisins is an improvement.

QUICK BISCUIT.—Put a small table spoonful of lard in 1 quart of flour, and add 2 tea spoonfuls of cream of tartar, finely powdered, with a tea spoonful of salt—put a tea spoonful of super carbonate of soda in a pint of warm milk with it in and make the paste of ordinary consistence for biscuit, adding flour or milk, if either are needed—roll it half an inch thick, cut in shapes and bake 20 minutes.

SPONGE CAKE.—10 eggs, leave out the yolks of 2, 1 lb. of sugar and the weight of 5 eggs in flour, beat the whites light, then add the yellow and sugar alternately, not beating them much, the flour stirred in very light.

MUFFINS.—Take 2 eggs, 1 spoonful of yeast, 1 pint of milk warmed, 1 lb. of flour; mix them up and let them rise, then bake them in rings.

RITNER CAKE.—5 cups of flour, 3 of sugar, 1 of butter, 1 of cream, 4 eggs, a tea spoonful of saleratus, the eggs put in without beating, mix all together, bake them 20 minutes in a middling quick oven.

MOUNTAIN GINGERBREAD.—1 cup of butter, 1 of sugar, 3 of flour, 1 of molasses, 3 eggs, table spoonful of ginger, and a little pearlsh.

For the Farm Journal.

The Potatoe Plant.

J. LACEY DARLINGTON:

DEAR SIR:—We promised your readers of the October No. our opinion having reference to adaptation of soil, and depth of planting and locality. In order to prevent us being assailed by any who may differ with us in the views laid down, we might state that we desire nothing more nor less than a fair trial, and let the verdict fall accordingly.

1st. Adaptation of soil and depth of planting.

The soil in order to bring it in a good condition for planting potatoes should be as permeable as possible; a field that has been plowed the previous season is better than sod, and if otherwise no such place will be suitable, we would recommend having the sod plowed that the frost will spend its force upon it and soften the clods—by no means would we recommend planting them under the sod as is often done, for several special and what we consider substantial reasons—first, it should be the intention to have them slightly covered with soil, that the air will, as far as possible, have access to the roots; and secondly, it will be almost impossible to bring the soil in the condition indicated by only once plowing. We have, therefore, premised that the potatoe should not be planted deep, and that even the small quantity of soil which we would have placed upon them, should be mellow for reasons already laid down, namely, to have free access of the atmosphere. We know a farmer in our community who manures his field in common as for any other crop, and covers the potatoes—plantings—with rye straw and then passes the plow along and covers them slightly with earth, and his crops are generally *good* and not affected with the rot. It will, therefore, be seen that we consider the health of the potato to depend on the permeability and mellowness of the soil, together with constant access of the atmosphere.

As for locality, we fully believe that this, not less important than any of the other points laid down, is too little thought of by the farmer. How often do we see large pieces with potatoes, in low, marshy, heavy soil, and as often poor crops; the potatoes after digging, very heavy and full of sap, and a few weeks after are half rotten. Experience has proven since the potatoe plant is naturalised, that high grounds are preferable and still more so, if they possess the qualifications already said, to wit, permeability and mellowness. It should be readily drained that no water stagnates between the rows which will invariably produce a heavy potatoe.

It should also be the aim of farmers to select a piece where surrounding obstacles will not prevent a free draft of the atmosphere. This is a most important point and is very frequently the cause of *fireblast*. Potatoes are planted near some woody place, orchard, &c., and is it not well known that we

rarely can expect a good crop? We would recommend, if at all practicable, a place which is open and accessible on all sides by the atmosphere; we could point to numerous instances in our vicinity where this alone was the cause of a failure.

We have now done, and if any of your patrons will give our experiments, &c., a trial, we hope a future will reveal with what success it was attended.

E. K. BEAVER.

Worcester, Montgomery co., Nov. 12, 1853.

Profits of the Fruit Culture and the best varieties for Market.

We extract from the "Country Gentleman" a report of an informal meeting of Pomologists in New York, on one of the evenings during the recent State Fair at Saratoga. It embodies some valuable information, and is of general interest. The subject of pear blight is of great importance, and by thus comparing notes and observations, it is to be hoped a remedy for this great drawback to pear culture may yet be found, as well as the cause of it. It seems to be admitted that a forced and unnatural growth, by stimulating manures increases the liability to be attacked, and also that it is more prevalent some seasons than others. We have never before had so much of it in our own grounds, as this year, nor heard of it to the same extent in the neighborhood of West Chester.

FIRST EVENING.—*Cracking of the Pear*.—The subject of the cracking of the pear was introduced, and a number of gentlemen present were unanimous in stating that in New England and in other places where the cracking had generally destroyed the *White Doyenne*, (or *Virgalieu*), this variety had entirely escaped when propagated on the quince. The only exception was mentioned by A. Saul, of Newburg, where it is usually quite fair, but during the present season of extraordinary rains it had cracked badly, and alike on both quince and pear. E. W. Leavenworth, of Syracuse, said that of the thousands of bearing trees of that place, none had ever cracked except those brought from Long Island; hence the inference that the disease was mainly from a constitutional condition of the stock or variety—most others, however, inclined to the opinion that this disaster results from a peculiarity of the season. The present year it had been more prevalent than usual; A. Saul stated that all his early pears were fine and the late ones much injured; the first part of the season being favorable, and the latter excessively wet. Cases were mentioned, however, where the influence of soil had contributed to the same result, in trees dissimilarly affected in the same immediate neighborhood, subjected alike to every peculiarity of the season.

The only instance known where the *Seckel* had ever cracked, was stated by E. W. Leavenworth, whose trees had in one instance borne badly cracked fruit. Every alternate row in his *Seckel* orchard had been heavily manured in the spring, the others remaining unmanured, but all were affected alike.

Several expressed the opinion that the *Van Mons Leon le Clerc* had of late years been less affected with cracking than formerly, and that the over-estimate at first placed upon it had induced many to

place it too low. Some were of opinion that it very nearly approached "best," while others considered it as only worthy to be classed "good," according to the scale of the American Pomological Congress.

The opinion was expressed by a number present, that the cracking of fruit results from the same cause that produces leaf-blight on the tree; and several instances were mentioned where the cracking had commenced first on the lower parts of the tree, where the leaves had been correspondingly attacked.

Select Lists.—It was proposed that such gentlemen present as were familiar with the best varieties of the pear, should furnish a list of the three best, or such as they would plant the most largely for their own use. The *Seckel*, *Bartlett* and *Virgalieu*, (or *Doyenne*,) were selected by P. Barry, of Rochester; E. W. Leavenworth, of Syracuse; and T. C. Maxwell, of Geneva. J. J. Thomas, of Macedon, named *Flemish Beauty*, *Seckel*, *Virgalieu*; J. Battey, of Clinton county, preferred *Louise Bonne de Jersey*, *Flemish Beauty* and *Winkfield*. Dr. Wendell, of Albany, and A. Saul, of Newburgh, would choose *Seckel* and *Bartlett*, and would add the *Virgalieu*, (or *Doyenne*,) provided it should still continue to do as well as in years past. It thus appears, that of the seven votes given, six were for the *Seckel*, six for the *Virgalieu*; five for the *Bartlett*, two for the *Flemish Beauty*, and one for the *Winkfield*.

The smallness of size has been stated to be an objection to the *Seckel*, one gentleman remarked that a tree on his grounds, which had been uncultivated, had borne such small fruit as is usually seen; the present year it had been well tilled, (without much manure,) with an increase in the size of the crop, and a three-fold increase in the size of the fruit—many of the specimens being quite as large as an ordinary *Virgalieu*. The opinion was given by several that the *Seckel* had not been allowed a fair chance in ordinary management, and that with high culture its fruit would be much heavier and finer.

Fire Blight.—E. W. Leavenworth had found the fast growing sorts of the pear, and those stimulated with high manuring, much more liable to blight than those with short, compact wood; and that the disaster usually occurred during the prevalence of the hottest weather; which was in accordance with the observations of several others.

SECOND EVENING.—*Cracking of the Pear.*—Some additional remarks were made on this subject by Dr. Ward, of New Jersey, adverse to the opinion that the cracking was caused by the removal of leaves by leaf-blight. On his grounds the *Van Mons Leon le Clere* tree grew with vigor, but the fruit cracked badly—the present season the cracks were nearly large enough to place one's finger within them, yet up to the present time the tree retains its foliage. His *Virgalieu* trees worked on quince, which, last year had given promise of doing well, had cracked badly the present season—the soil in which they grow is regarded as one of the best for the pear, and these trees grow vigorously. T. C. Maxwell, of Geneva, had pears of the *Virgalieu* grown on quince considerably affected, while those growing on pear stocks were entirely free.

Profits of Fruit Culture.—This subject being introduced, some statements were made of the large profits derived from the culture of the *Lady Apple*. W. H. Denning, of Dutchess county, had annually sold forty dollars worth of fruit from a single tree, the price varying from eight to twelve dollars per bushel. The soil was gravelly. On soils of a differ-

ent character the crop had been quite unsuccessful. One gentleman had picked ten barrels from his trees, and found only two barrels fair, the least blemish entirely spoiling the sale of a fancy fruit. Another gentleman stated that from an orchard in Orange county, out of five barrels he had not obtained a single hatful of good specimens. Dr. Ward said that in New Jersey it succeeded well on gravelly loam, which was generally admitted to be its best soil. Information was given of the large profits of an orchard at Darby, near Philadelphia, containing 200 trees, and occupying four acres of land. The average annual net profit was \$800, or \$200 per acre. The soil of the orchard is constantly cultivated in crops, with the application of bone dust, and it is regarded as one of the neatest and best specimens of orchard culture in the State.

The high price of this apple depends entirely on the demand for it in cities for fashionable evening parties, which is far greater than the supply. American grown *Lady Apples* also command a very high price for the same object in London. The opinion was however expressed, that as it is not a fruit of the highest character and value, and the fashion may not always continue in its favor, it would be unsafe to plant it largely, or exclusively for market.

Profits of Pear Culture.—It was stated by a gentleman present that Martin Smith of Tarrytown, had sold \$600 worth of *Virgalieu* pears (at \$4 per bushel,) from less than an acre, besides nearly \$100 worth of *Bartletts*. Another instance was mentioned where an old tree, growing in Western New York, had annually yielded from \$20 to \$30 worth of pears, at two and a half dollars per bushel. An acre would admit 100 such trees, and would yield annually from \$2000 to \$3000 in fruit. The tree mentioned received no cultivation. Dr. Ward had obtained from forty trees of the *Bartlett*, which had been planted only seven years, and which had commenced bearing three years afterwards, an average of half a bushel per tree the present season, and had sold them from four to six dollars per bushel. T. C. Maxwell had trees of the *Flemish Beauty* seven years planted, and two years old when set out, which had borne two bushels each last year, and over one bushel this.

Ripening and Marketing Fruit.—All present who had tried the *Femish Beauty*, had found it, in common with many other sorts, greatly improved in flavor by picking a few days before maturity, and ripening within doors. This treatment had also been found necessary by some on account of the liability of this pear to be blown off by the wind. P. Barry said that the treatment must be adapted to the peculiarities of the different sorts—that some pears of a soft, melting character, such for instance, as the *Flemish Beauty* and *Belle Lucrative*, should be ripened in a cool room, or dry cellar, to prevent the process from being too rapid, and avoid speedy decay. On the other hand, those of a harder or more gritty nature, needed a much warmer temperature. The observation of other corroborated this statement. A dark drawer had been found the best place for a pear to complete its ripening, and to acquire its finest color. Whatever the temperature might be, that is best adapted to the maturing process, preserving a *uniformity*, and avoiding changes, was regarded of great importance; and also that too dry atmosphere was unfavorable to the ripening of winter pears, especially, which had to remain exposed to it a long time, and which, if they once became too dry, never could be made to soften by maturity.

Dr. Ward had found the profits of market pears to depend greatly upon their proper ripening; it not unfrequently happened that a tripple price was obtained for handsomely matured *Bartletts* over those equally well grown, but in a green condition. He had sold them for six dollars per bushel, side by side with those equally as fine in every other respect, that would scarcely bring two dollars, and which had not the tempting exterior of full maturity. He had also found selection a matter of considerable importance, and had obtained as much for the finest assorted *Bartletts*, taken from a large quantity, as he could have obtained for nearly the whole unassorted. The best *Bartletts* had sold at retail in New York city at twelve to twenty-five cents each.

The *Seckel* pear, although of such superlative high flavor, was very low-priced in market, although instances were mentioned where six to eight dollars per bushel had been obtained for finely grown specimens in the Boston market.

Winter Pears.—Gentlemen present being called upon to name the best winter pears, P. Barry expressed his preference for the *Lawrence*, *Winter Nelis*, and *Easter Buerre*. The *Lawrence* and *Winter Nelis* would ripen well in boxes in cellars, and the *Easter Buerre* was unquestionable the best very late keeper, but should always be grown upon the quince. J. Battey, of Clinton county, named two, the *Winkfield* and *Winter Nelis*; J. J. Thomas selected the *Winkfield*, *Lawrence*, *Winter Nelis* and *Easter Buerre*; Dr. Wendell preferred the *Winkfield*, *Winter Nelis* and *Easter Buerre* on quince. For exclusive raising on quince, P. Barry would prefer the *Winkfield*, *Glout Moreau*, and *Easter Buerre*. A few gentlemen who were acquainted with the *Doyenne gris d'Hiver*, regarded it as giving the highest promise of all the new winter sorts.

Some discussion occurred in relation to the difficulty of sending ripened winter pears to city markets in winter from the danger of freezing on the way. J. Battey said that the practice was now common of running freight cars, warmed artificially, for carrying potatoes from Northern New York and Vermont to the Boston market, in the depth of winter; and that no difficulty could occur in the case of winter pears. It was, however, believed by others, that as soon as winter pears should be raised in large quantities, establishments would spring up in the cities for purchasing winter pears in autumn, when they could be most safely transported to a distance, and for ripening them on a large scale for the market. The ripening process could be done more economically if performed in a wholesale manner, and could doubtless be more perfectly completed, than by any small arrangements for the purpose by the raisers of the fruit.

WATER IN PEAT.—The importance of placing peat and swamp muck in a position to drain and dry thoroughly after digging, and before drawing, may be well understood when it is stated that usually from 80 to 90 parts out of a hundred are water, as commonly seen in a moist state, fresh and black from the swamp.

A WORD TO BOYS.—Stick to your trade, boys, and learn to work if you wish to be truly independent. There is no more pitiable sight than a half mechanic applying for work. He is always at the foot of the hill and labor as he may, unless he becomes perfect in his trade, he can never rise.

NEW CORN CRUSHER.—Thomas Durden, of Montgomery, Alabama, has taken measures to secure a patent for a new corn crusher, which is exceedingly well adapted for cracking and crushing corn in the ear, also various other vegetables. The hopper for the reception of the corn is peculiar; it receives the ears of corn by various small openings; they pass down and are first cut by a revolving S shaped knife on a vertical spindle, and after they pass down and are crushed between grooves and projections on the revolving spindle, and grooves and projections on the inner face of the machine. The grinding parts are of cast iron, the inside of the case being a hollow cone, its bottom where it discharges being the apex, and the grinding spindle or muller acting with its outer on the inner surface of the case. The apparatus is simple and good.—*Scientific American*

AMERICAN WOOL.—Peter A. Browne, of Philadelphia, in a communication to the Richmond (Va.) Whig, asserts that he can show that "as fine a fleece can be procured in the United States as in any portion of the world." He says that he has in his possession wool grown in Allegheny county, Penna., by Wm. Hall, which measures from 1-2186 to 1-2500 part of an inch, while the finest wool in the collection sent to him by the king of Prussia, and the finest among the specimens sent to him by the king of Saxony, measures 1-2186. Mr. Browne denies the correctness of the decision on the subject at the London Crystal Palace Exhibition, and produces facts to show that the jury on wool did injustice to the specimens of American wool exhibited.

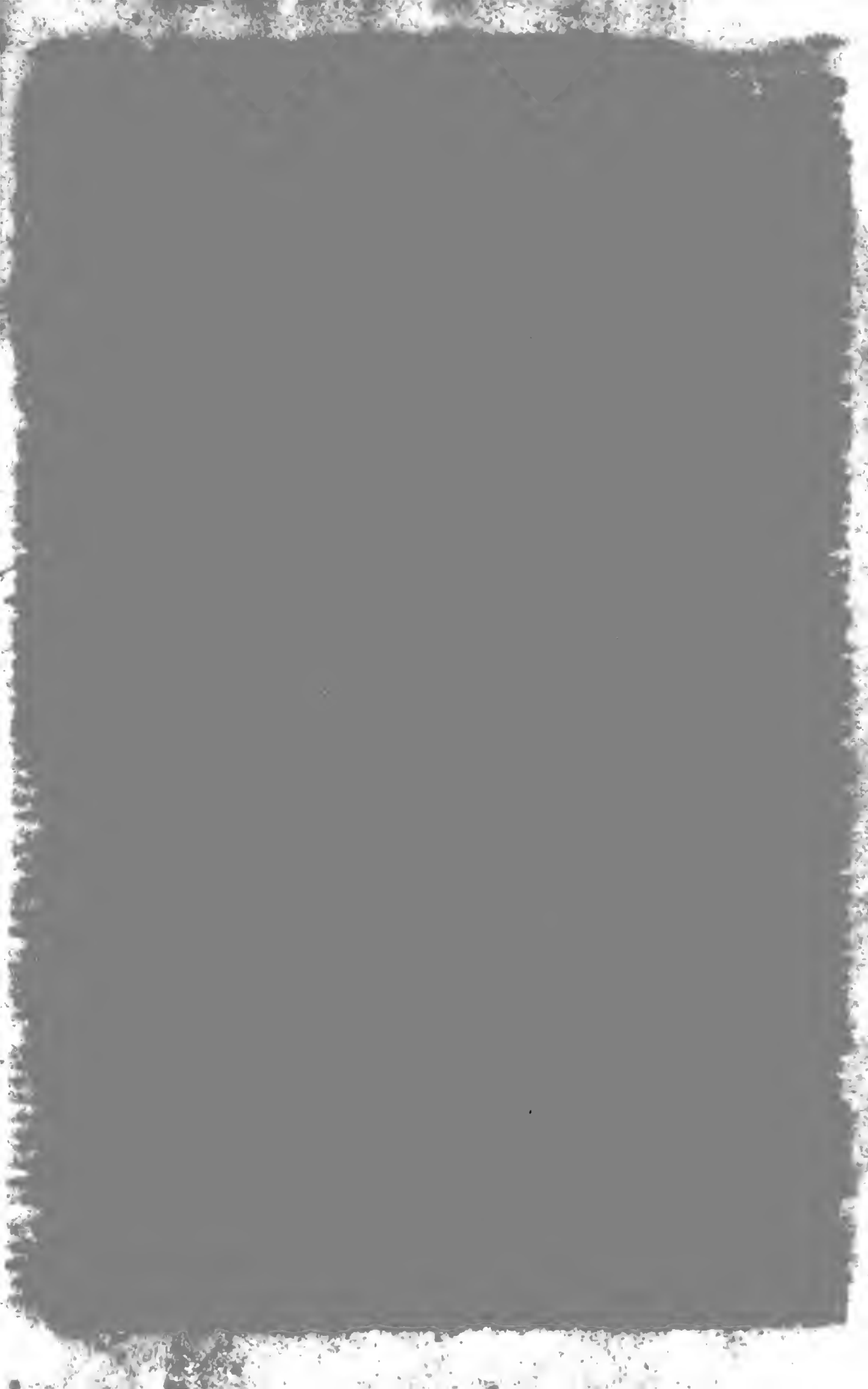
IMPROVEMENT IN GRIST MILLS.—The Worcester Spy speaks of improvement in the manner of pecking mill-stones by which their capacity for grinding can be doubled. The editor of the Spy saw it applied to a mill in Worcester, and the result of its application was that a bushel of Northern corn was ground in a minute and a half—and that an old fashioned mill, with a single run of stones, with the improvement, will grind forty-six bushels an hour.

To Measure an Acre.

Land, 30½ square yards make one sq. rod; 40 sq. rods make one sq. rood; 4 sq. rood, one acre; 640 acres one square mile; 4,840 sq. yds. or 160 rods made one acre.

In measuring an acre by yards, the usual practice is to trace off 70 yards in length, and 70 yards in width; this in a rough way, may be considered near enough for practical purposes, but as 70 yards either way make 4,900 sq. yds. it exceeds one acre by 60 yards. The determine an accurate acre it may be measured 70 yards in length, by 69 1-7 yards in width. The same result may be arrived at by measuring 220 feet in length, and 198 feet in width, or by measuring 73 1-3 yards in length, by 66 yards in breadth.—*Amer. Farmer.*

LIME DUSTER.—An English orchardist, whose orchard occupies 50 acres, protects his trees from caterpillars and other insects by shaking over the young foliage quick lime pulverised and sifted through a fine sieve. He puts the lime into a tin conical canister, perforated at one end with a long handle. The time for using it is in the dew of the morning, or whenever the leaves are damp. He has found it very effectual.





Pontiac.

The opposite cut represents the Durham Bull, Pontiac, (sire and dam imported,) recently the property of Seth A. Bushnell, of Hartford, Trumbull county, Ohio, and sold by him at the late Pennsylvania State Fair, at Pittsburgh, to Gen. Wm. Larimer, of that city.

Pontiac is six years old, a light roan color, medium size, compact and symmetrical form; has a remarkably prominent and sparkling eye, combined with a quietness and docility of temper, which insure fine feeding properties. Where known, the early maturity of his stock with other excellencies cause them to be popular and eagerly sought after.

Philadelphia Society for Promoting Agriculture.

The exhibition of the above society, held at the Rising Sun, near Philadelphia, was considered in most respects fully equal to former years, although from the absence of two or three principal contributors in neat cattle, there was a falling off in this department. In a fine display of horses, also sheep, swine, poultry, agricultural implements and produce, the exhibition maintained its previous prominent character. The ploughing match was postponed on account of unfavorable weather, and two days were occupied by the exhibition, instead of three as heretofore.

An address was delivered by Thomas H. Burrowes of Lancaster, which is very highly commended by those who heard it.

Mr. Longworth on the Strawberry Question shall have a hearing in our next.—**ED. FARM JOURNAL.**

For the Farm Journal.

Hessian Fly.

MESSRS. EDITORS:—The Hessian fly is perhaps, more destructive to the wheat crop of this country than all other insects and vermin, and, indeed seems, most to be dreaded. That the wheat crop of our country should some seasons be cut short even millions of bushels is, much to be lamented, while no remedy we believe, as yet of general practicability has been discovered to stay the ravages of this insect.

If however the knowledge that is in possession of some individuals in relation to it, were generally known to farmers, it is possible, the ravages of this destructive little agent, might be prevented in some measure at least. The injury to the plant by it, seems to be done entirely while the insect is in its larva or egg state; absorbing in some way as its nourishment the juices of the growing stalk. After it has arrived at a certain stage (as we are informed,) it escapes from its outer skin or shell a winged insect, and rises in the air. And in this transformed state, (we are told) it propagates its species by depositing its eggs in the young wheat plants in the fall of the year. We have taken the pains to put

some roots and stalks in which were a deposit of these eggs into a bottle, for the purpose of getting a sight of the creature in its winged state but did not succeed. There are but few persons, we believe who know it in its winged form; we have not met with one who could recognize or point it out to us distinctly among the many winged tribes that are seen sporting in the air. Will you or some of your correspondents be so kind as to give through the columns of the Farm Journal a description of it, which with a cut of the same, would enable any one to recognize it with a little pains.

J. H. ALEXANDER.

In reply to our correspondent above, we shall give, in our January number, engravings of the winged Hessian Fly, so that he or any one can easily identify it, together with its history and habits. His request was not received in time for present number.—**ED.**

For the Farm Journal.

Nepaul Barley.

EDITORS OF FARM JOURNAL.—SIRS:—Enclosed I send you a small sample of a new species of Barley. It was sent to a Gentleman of Georgia during the winter of 1850-'51, from the Nepaul Mountains of Hindostan, and is believed to be the first of its kind ever seen in the United States. The grain has very much the appearance of the "Emur" or wheat barley only smaller, but that variety like all others, has beards or awns, while this is entirely beardless, or what is termed bald. The plant is remarkably vigorous, tillers well, and from a single years trial, I judge it will succeed in this latitude quite as well as any other kind of spring barley. When in bloom, it looks beautiful in contrast with other grain, the whole patch being covered with its bright yellow inflorescence.

As I have rented my farm, I am under the necessity of curtailing my propensity of experimenting with new grains, grasses, &c. I am therefore willing to distribute this grain (about 1 quart,) in small parcels to "patrons of the Farm Journal" for a more extended trial.

Those who wish samples of it will please advise me by mail, enclosing a postage stamp to cover expenses of mailing. A report of their success or otherwise through the pages of the "Farm Journal" is all the recompense I desire, except I might add, a like liberal distribution of similar favors, by those who may be in possession of any new or rare seeds, fruits, &c., &c.

Very respectfully,

J. B. GARBER.

Mountville, Pa., Nov. 14th 1853.

For the Farm Journal.

Plan of an Ice House.

WHEATLAND, NOV. 14, 1853.

MR. EDITORS:—I will volunteer a description of

an ice house for the benefit of your numerous readers, if you think it worthy of an insertion. My house is ten feet square, which is sufficiently large for any private family. I excavated the earth to the depth of eight feet, by eleven in length and breadth; then made a frame consisting of four sills, four plates and eight posts, framed so as to make it ten feet square; I then have six inches of space at each side of my frame, which I fill by placing plank two inches thick horizontally and filling in with clay as I place them. This will finish the house all but the roof and gables.

And for convenience in filling, the roof should be adjusted so as to be easily removed, which can be done by placing an upright post in the centre of each gable of whatever height you desire for the pitch of your roof, then by laying a plate from post to post you have a stool for each side of the roof to rest on, independent of each other, without the rafters being connected, which enables you to lift either or both sides off for the purpose of filling. For the gables it requires an extra pair of rafters, independent of the roof, to weatherboard against; then leave a door at one end and embank and sod the rest, and your house is complete. For a bottom I prefer cord wood or rails, covered with straw; also straw set up between the ice and plank. I break my ice fine and throw water on it until it is frozen in one cake. By the above method I have at this date plenty of ice in my house, (plenty even if it was warm weather.)

Yours,

Carlisle, Pa.

W. L. C.

For the Farm Journal.

Peter Collinson's Cedar of Lebanon in the Garden of Plants.

MESSRS. EDITORS:—Professor Silliman in his late interesting work thus describes it, giving an account of this wonderful garden. He says:—

"On a mount called the Labyrinth from its intricate windings, there is a magnificent Cedar of Lebanon, which was presented to Jussieu by Collinson, of England, in 1734. It is still in full vigor. At six feet from the ground, it is ten and a half feet in circumference. Its broad spreading horizontal branches, so numerous, and thickly studded with sombre evergreen spiculæ, extend far and wide, shading a large area, and enabled us to understand and to realise how grand and glorious was once the venerable Libanus, adorned by forests of its own native cedars. It was a source of satisfaction to me, while waiting the arrival of my companions, to sit contemplatively under the shadows of this princely tree."

I would that one of your good neighbors, who has done so much to interest us all in the character of this same "Collinson, of England," might have occupied a seat along side of his friend Silliman, "contemplatively under the shadow of this princely tree."

Philadelphia, Nov. 15.

DELTA.

For the Farm Journal.

Chester County Feldspar.

MESSRS. EDITORS:—A distinguished traveller thus speaks of the substance of Porcelain of our own country, in describing his recent visit to the manufactory at Sevres, 100 leagues from Paris:

"We have in the United States the most perfect materials. Nothing can exceed the feldspar of Chester county, Pennsylvania, from which the beautiful Philadelphia porcelain was made, and which, when placed alongside of that of Sevres, *could not be distinguished from it.*"—SILLIMAN.

This last fact he gives from his own observation on the spot, where the comparison was made under his eye, in company with the French Superintendent.

Could not the Farm Journal give us some little history of this attempt to manufacture porcelain at home?

DELTA.

Philadelphia, Nov. 15.

Pennsylvania Horticultural Society.

The Exhibition at the stated meeting, held on Tuesday evening, was of unusual brilliancy. The display of Chrysanthemums far surpassed all others shown, and the fine, well grown plants did much credit to the cultivators. Mr. Buist's collection comprised many of the choicest pompones, and the large flowering varieties, and were remarkably well set plants. Mr. Dreer's dwarf plants presented a rich array, and in the finest condition. Mr. Cope's collection contained some of the finest varieties, and well grown. Mr. Knorr's table presented the greatest number and variety of Lilliputian specimens, being in small pots and in profuse bloom was a show of itself. Adam Uber had very large plants in full flower. Mr. Dundas' gardener a choice variety of the large flowing kinds. A. Parker had a large collection.

Of Fruits, James B. Baxter exhibited dishes of Pears of the Duchesse d'Angouleme, Passe Colmar, D'Aremberg, St. Germain and Napoleon varieties. Mr. Buist, the Duc de Bordeaux and Monsieur Le Cure sorts. N. W. Roe, the Bon Cretien. William Johns brought six kinds of grapes in prime condition, and C. V. Hagner the Catawba grape.

Vegetables in variety were shown by C. Cope's gardener. Fine Celery by James Jones, from the Girard College grounds, and the Brussels Spouts by Mr. Sayer's gardener.

Premiums were awarded as follows:

Chrysanthemums—For the best six named large varieties to Thomas Fairley, foreman to Robt. Buist. For the second best to James Bisset, gardener to James Dundas. For the six Pompones in pots, to Thomas Fairley. For the second best to Henry A. Dreer. For the best specimen of the large variety to Thomas Meehan, gardener to Caleb Cope. For the best Pompones to Thomas Fairley. And special premiums of \$2 each to J. F. Knorr's gardener, Adam Uber, Thomas Fairley, and A. Parker, for displays of Chrysanthemums.

Plants shown for the first time—A premium of \$3 for *Medinella Speciosa*, to James Bisset; \$2 for *Callanthe Veratrifolia*, to Thomas Meehan. Bouquet Design—for the best to Thomas Meehan. Basket of Cut Flowers—for the best to James Bisset, for the second best to Thomas Meehan.

Pears—for the best, the Duchesse d'Angouleme, to Isaac B. Baxter; for the second best, the Passe Colmar, to the same; and a special premium of \$3 to William Johns, for a fine display of Grapes, some six or seven varieties, all of which were in prime order.

Celery—for the best to James Jones, (Girard College grounds,) for the second best to the same. Broccoli—for the best to Thos. Meehan. Brussels Sprouts—for the best to Daniel McDermot, gardener to Mr. Sayers. Display—for the best, by an amateur gardener to Thos. Meehan, gardener to C. Cope.

The Fruit Committee submitted a very interesting report of the objects inspected by them since the last stated meeting of the society.

Fifteen gentlemen were duly elected members.—*Eve. Bulletin.*

Ad Interim Fruit Report, for November.

PHILADELPHIA, Nov. 14, 1853.

To the President Penna. Hort. Society:—

Since the October meeting of the Society, the following fruits have been forwarded to the Fruit Committee for examination:

From P. H. Cassidy, 29 Logan Square, through Robert Kilvington, two varieties of Grapes.

1. *The Cassidy*—A accidental seedling white Grape, with native leaf, and dark purplish wood, that sprung up in Mr. Cassidy's yard in 1847, and fruited in 1852 for the first time. *Bunch*, of medium size, tolerably compact, and sometimes shouldered. *Berry*, below medium, five-eighths of an inch in diameter; *form* round; *color*, greenish white with occasionally a faint salmon tint, and thickly covered with white bloom; *flesh*, juicy with little pulp; *flavor*, pleasant; *quality* "very good."

2. *The Kilvington*.—This may prove a known native variety. It was purchased by Mr. Cassidy, 17 years ago, before it had fruited, for the Isabella, and removed from Schuylkill Fourth and Chestnut sts., to its present locality in Logan Square. *Bunch*, medium, compact. *Berry*, below medium, five eighths of an inch in diameter; *form*, round; *color*, red, a shade deeper than the Catawba, with much bloom; *seed*, unusually large; *flesh*, contains some pulp, which is not tough, but half tender, and melting; *flavor*, vinous and saccharine without any Catawba aroma; *quality*, "best."

From Robert Iredell, Norristown, through Mr. Jones.—A specimen of Duchesse d'Angouleme of enormous size, nearly five inches long by four and a quarter broad, and weighing twenty-five and a quarter ounces—exceeding in size any pear we have ever seen grown in this country. Notwithstanding its magnitude, we have never eaten a better flavored Duchesse,—a variety, by the way, which, when fully ripened, we regard in *quality* at least "very good."

From Mr. Eckert, Reading—Additional specimens of the pear mentioned in the last "Ad Interim Report" as being probably the *Beurre Diez*. They were even larger than those previously received, and possessed a still more brilliant cheek and equally fine flavor.

From St. Louis County Missouri, through J. T. Thomas, Esq.—Two Apples for their names. One we recognized as the *Fandiver*; the other is probably an apple of Western origin, with which we are unacquainted.

From Thomas Thornily, Fallstown, Beaver county, Pennsylvania—A large collection of Apples, exhibited at the State Fair at Pittsburg, and sent to us, by

Mr. Thornily, at the request of some of our friends who saw them on that occasion. But before they came into our possession, which was not until the 14th of October, they had been exhibited at the Burlington County Agricultural Fair at Mount Holly and at the Fair of the Philadelphia Society for promoting Agriculture. Some of us noticed them at both of these Exhibitions, and were not a little surprised at the size and beauty of many of the specimens, and the great number of varieties embraced in the collection. Unfortunately, when we received them, the handsomest specimens had all disappeared; and the extensive collection had dwindled down to fourteen sound apples, and nine in a state of decay. We were therefore much disappointed in being prevented from giving to so choice a collection the minute examination it so richly merited. Concerning it, however, we may remark generally, that it indicated either a peculiar pomological adaptation in the soil and climate of Beaver county, or extraordinary skill in fruit culture, on the part of Mr. Thornily;—probably both.

From P. R. Freas, Esq., of the Germantown Telegraph—Large and beautiful specimens of two varieties of Pears.

1. *Vicar of Winkfield or Monsieur le Cure*—The size, productiveness, and uniform bearing tendency of this variety fully entitle it to be ranked in *quality* "very good."

2. *Doyenne d'Hyver*.—This name is given as a synonyme of the Easter Beurre by the London Horticultural Society, and of the Easter Bergamot by André Leroy, of Angers. The Easter Beurre is a Winter Pear of the "best" quality when properly ripened. It must be confessed, however, that our knowledge of the pear ripening process, of the Winter varieties, is exceedingly defective; and on this account, it often happens that they fall short of their intrinsic excellence, at their appropriate season of maturity.

From Col. Charles R. Belt, of the District of Columbia—Specimens of Belts Hybrid Walnut. The history and appearance of this unique and interesting hybrid present unequivocal evidence that it is a natural cross between the Butternut (*Juglans cinerea*), and the English Walnut (*Juglans regia*), the latter being the maternal parent. It originated about twenty years ago at Chevy Chase, the residence of Col. Belt near Washington, District of Columbia, from an English Walnut planted by his brother, Capt. Wm. I. Belt, late of the United States Navy. Capt. Belt procured the nut from an English Walnut tree in the garden of Mrs. Bowie, of Prince George's County, Maryland. Within a few hundred yards of Mrs. Bowie's residence, grew a number of Butternut trees some of the pollen from the blossoms of which had no doubt been wafted by the wind, or conveyed by insects to the English Walnut tree in the garden and occasioned hybridism. After the nut had sprouted, Col. Belt took it up and replanted it in the locality it at present occupies. The tree is a vigorous grower, and is represented as being exceedingly ornamental. In 1852 it fruited for the first time and in September of the same year, specimens of the nuts, with the wood and foliage, were exhibited by Mr. Joshua Pierce, of Washington, at the meeting of the American Pomological Society, in Philadelphia. The nut, in its general appearance, differs very materially from any others of the *Juglans* family:—size, large—one and three-fourths inches long, one and seven-twelfths wide, and one thick, exclusive of the remarkable arena, elevated a fourth of an inch above the

surface and extending entirely around its longitudinal circumference; *form*, ovate, pointed at its apex; *exterior surface*, deeply and boldly, but interruptedly and irregularly sulcated, without having the continuous longitudinal furrows usually noticed in the Butternut; *color*, light brownish yellow; *kernel*, fine. Mr. Pierce has succeeded in two instances in grafting this variety on the English Walnut. What has been the success of others to whom scions were sent, we are not informed. It is extremely difficult to graft the Walnut in any of the ordinary ways. Owing to the excitability of its buds, they are apt to push, and exhaust the organizable matter of the scion, before its union with the stock can take place. This usual cause of failure is obviated by working, as recommended by the late President Knight, with the base of the annual shoots, the buds of which are small and but little developed. Another successful mode, noticed in D'Albret's recent work on grafting, is to cleftgraft in the side of the young shoots, and is said to answer well whether performed in the solid or herbaceous state. In regard to the stock for Belt's Hybrid, we would suggest the Butternut for standards, and the *Juglans Præparuriensis* for dwarfs.

From J. B. Garber, of Columbia, Pennsylvania—Nine varieties of Apples, sent to him from Georgia. These are the first apples we have received that were grown in that State. Much attention, we understand, is being paid at this time, by the Pomologists of Georgia, to the raising of late kinds of this fruit. Those that ripen with us in the winter, become, when transferred so far South, autumn varieties. This fact has induced them to turn their attention to Southern Seedlings. And we learn, that they have already succeeded in originating a number of kinds, which promise to be far better keepers, than those which they had previously obtained from the North. We are so much pleased with the appearance of those sent to us by Mr. Garber, that we hope Mr. Richard Peters, of Atlanta, or some of our other Georgia friends will furnish us, at the proper season, with other specimens for examination. Although those we have received are not in a condition for testing, we deem them sufficiently interesting to merit a full exterior pomological description, especially as most of them are entirely new to us. And if it should prove from our descriptions, that we have not received the true varieties, we trust specimens that are genuine will be forwarded to our Society.

1. *Limber Twig, or James River.*—This variety has been cultivated, to a considerable extent, in Virginia, and some of the Western States. *Size*, full medium, three inches long by three and three-sixteenths broad; *Form*, roundish oblong; *Color*, striped and marbled with pale red on a yellowish ground, yellow around the crown, a good deal russeted about the base; *Stem*, three-fourth of an inch long, by one-twelfth thick, inserted in a deep, acuminate, russeted cavity; *Calyx*, small, closed, set in a wide, shallow basin.

2. *Sommerour*—*size*, large, three and one-eighth inches long, three and five sixteenth broad; *Form*, roundish-oblate; *Color*, a mottled greyish red, with dark crimson stripes, and containing numerous large grey dots; *Stem*, five-eighths of an inch long and one-fifth thick, inserted in a deep, narrow, partially russeted cavity; *Calyx*, small, closed, set in a deep, wide plaited basin.

3. *Berry.*—*Size*, rather large, two and five-eighths inches by three and five-sixteenths; *Form*, roundish-oblate; *Color*, striped and mottled with crimson on a

greenish-yellow ground, with a number of green russet spots; *Stem*, one-half an inch long, one-tenth thick, inserted in a tolerably deep cavity; *Calyx*, rather large, set in a wide, shallow basin.

4. *Mountain Sprout.*—*Size*, medium, two and three fourths inches by two and seven-eighths; *form*, oblong-truncate; *color*, red with stripes of deeper hue, white dots numerous, *stem*, three-eighths of an inch long, one-eighth thick, inserted in a narrow cavity; *calyx*, medium, partially open, set in a wide, deep, slightly furrowed basin.

5. *Camac's Sweet.*—*Size*, below medium, two and one-half inches long, by two and three-fourths broad; *form*, roundish conical; *color*, whitish-green, clouded with green-russet on the more exposed parts, and a faint brown blush; *stem*, (perhaps broken,) one-fourth of an inch long, and one-eleventh thick, inserted in a narrow cavity; *calyx*, large, closed, set in a wide, shallow basin.

6. *Nickejack.*—*Size*, large, two and three-fourths inches long, by three and seven-eighths broad; *form*, oblate; *color*, striped and mottled with red on a greenish ground, grey dots abundant; *stem*, five-eighths of an inch long, and one-eighth thick, inserted in a wide, not very deep, russeted cavity; *calyx*, large, partially open, set in a wide, superficial basin; *core*, under medium; *seed*, small, light brown ovate; *flesh*, tender, juicy; *flavor*, fine, with an exceedingly delicious though delicate aroma; *quality* "best." This variety we regard with especial favor; and we feel assured it will become popular wherever known. It is said to be a native of North Carolina, and to have been found growing among the Cherokee Indians.

7. *Callusaga.*—*Size*, above medium, two and three-fourths inches long, by three and one-fourth broad; *form*, roundish, slightly tapering to the crown; *color*, dull brown, faintly striped, on a greenish yellow russet ground; *stem*, three-eighths of an inch long, and one-eighth thick, inserted in an irregular, rather deep cavity; *calyx*, large, open, set in a deep, wide, obscurely furrowed basin.

8. *Cambury.*—*Size*, medium, two and five-eighths inches long, by three broad; *form*, roundish-conical; *color*, brightly striped with carmine on the unexposed side, and of a deeper red on the part subjected to the full solar influence, many grey russet dots, large and sometimes stellate towards the base, smaller and more numerous near the crown; *stem*, three-eighths of an inch long, and one-ninth thick, inserted in a narrow, acuminate, russeted cavity; *calyx*, small, closed, set in a wide, shallow basin, with four or five small fleshy elevations, at the bottom near the calyx.

9. *Dapper.*—*Size*, rather small, two and one-eighth inches long by two and three-fourths broad; *form*, roundish-truncate; *color*, whitish-yellow, with several crimson specks, and faintly clouded and marbled with yellowish green with an obscure pale orange cheek; *stem*, three-eighths of an inch long, and one twelfth thick, inserted in a medium, acuminate cavity; *calyx*, small, closed, set in a moderately wide, very deep basin.

From Chas. Kessler, Esq., Reading—A collection of Fruit, embracing specimens of a Pear from Lower Heidelberg, Berks Co., Pa., and nineteen varieties of Apples, eleven of which were grown in Berks county, and eight near Dixon, Illinois:

1. *The Heidelberg Pear*—which was supposed to be a foreign variety, we did not recognize till it was cut, when it at once became known to us as the *Feaster*. Under the name of *Bleecker's Meadow*, it is noticed in most of the horticultural works, but its mer-

its have not been properly appreciated. And although admitted to be a native of Pennsylvania, there is no published record of its history, nor any information given in any work in regard to the particular locality of its origin. The Philadelphia Market has long been abundantly supplied with it, under the names of *Spice* and *Spice Butter*. Not, however, until recently, have we been able to trace its history; for which we are chiefly indebted to Mr. Mahlon Moon, of Morrisville, Bucks county. This variety originated, about seventy years ago, with Aaron Feaster, of Northampton township, Bucks county. Having sprung up on a piece of ground used as a meadow, Mr. Feaster designated it *the Meadow Pear*; subsequently it was named *the Feaster*. The original tree is still standing, and continues, at the age of three-score years and ten, to bear most abundantly. Some seasons, it has yielded five barrels of fruit, which was sold for forty dollars. Although rather coarse in texture, and somewhat gritty at the core, yet when properly house-ripened, it is rich, melting, delicious, and in quality, "very good." Judging from the form and flavor, its parents are probably the Seckel and the Bergamot. October is its period of maturity.

2. *The Hepler*—grown by Mr. Hepler, of Reading. A native winter Apple described in the ad interim Report for April last.—The present specimens differ from those sent us last spring, in being larger, two and three-fourths inches, by three and one-fourth; in possessing a short stem, three-eighths long, by one-eighth thick, and in having a marbled red cheek with usually one or more white marks, as if the red coloring matter had been entirely rubbed off. Specimens not sufficiently mature for testing.

3. *The Fornwalder, Fallenwalder, Fallwater*.—We have been informed by some of the old inhabitants of Reading, that this variety originated with a Mr. Fornwald, of that place; hence the name Fornwalder. In our notice of it in the March ad interim Report, we considered it of "good" quality. The specimens received this season, being remarkably fine, and measuring more than a foot in circumference, have given us a still more favorable opinion of it. Indeed the uniformly large size, unblemished appearance and fair quality of the Fornwalder render it worthy of being more widely cultivated.

4. *The Rambo*.—Philadelphia was plentifully supplied, some years ago, with this apple, from the neighboring State of New Jersey. Now it has almost entirely disappeared from our market. The specimens, however, sent by Mr. Kessler, clearly indicate that it still flourishes in the vicinity of Reading.

5. *The Keim*—grown on the premises of Mrs. Kessler. This native apple, of Berks county, we noticed in our February and March "ad interim" Reports. The present specimens are larger and fairer than those previously received, but have not yet reached their period of maturity.

6. *The Krouser*—a native apple, noticed in our December and February Reports.

7. Unknown—grown near Dixon, Illinois. Size, very large, three and one-quarter inches long by four broad; form, roundish, obscurely conical, somewhat compressed at the sides; color, yellowish green, with a faint blush; stem, short, stout, half-inch long, by one-sixth thick, inserted in a wide, obtuse cavity; calyx, open, set in a deep, rather narrow basin, slightly plaited. Not mature.

8. Unknown—grown near Dixon, Illinois. Size, very large, three inches long, by three and seven-

eighths broad; form, oblate; color, brownish red, mottled with greyish russet, and interspersed with numerous large grey dots with a russet point in the centre of each, yellowish green about the crown; stem, short, stout, fleshy, five-eighths of an inch long, and three-quarters thick, inserted in a wide, shallow, russeted cavity, with a prominence on one side; calyx, large, closed, set in a wide, rather shallow basin. Not mature.

9. Unknown—grown near Dixon, Illinois. Size, large, two and seven-sixteenths inches long, by three and three-sixteenths broad; form, roundish oblate, somewhat angular; color, beautifully striped with carmine on a yellowish white ground, stem, short, three-eighths of an inch long and one-tenth thick, set in a deep, moderately open cavity; calyx, closed, set in a narrow, superficial basin. Not mature.

10. Unknown—grown near Dixon, Illinois. Size, large, three inches long, by three and one-half broad; form, oblong truncate; color, brown, on a greenish yellow ground, with a number of grey dots; stem, half-inch long and one-eighth thick, inserted in a rather deep cavity; calyx, medium, set in a deep, wide, furrowed basin. Not mature.

11. Unknown—grown near Dixon, Illinois. Size, large, two and seven-eighths inches long, by three and three-eighths broad; form, roundish-conical; color, striped and mottled with red, on a greenish yellow ground; stem, short and slender, one-half inch long and one-eleventh thick, inserted in a deep, narrow cavity; calyx, small, partially reflexed, set in a narrow, moderately deep, plaited basin. If the quality of this and the four preceding apples corresponds with the size and fine appearance of their exterior, they should be widely disseminated. Perhaps our corresponding member, Dr. Kennicott, or some of the Pomologists of Chicago, whence the trees were obtained can inform us what the varieties are.

12. *Labeled Limber Twig*—a small, pleasant, greenish yellow apple from Illinois, not true to name.

13, and 14, also from Illinois, are small and not prepossessing in appearance.

15. *Vandiver*—grown by Mrs. Kessler, of Reading. Specimens very fine. This variety is chiefly prized for its culinary properties. In regard to the orthography of its name, we would remark, that in Delaware, where it originated, there is no family with the cognomen Vandervere, but there are many of the inhabitants of Swedish descent, in that State, who write their names Vandiver.

16, 17, 18, 19 and 20—were grown by David L. Wenrich, of Reading. Most of these are sweet apples, of pleasant flavor. But their small size, unaccompanied by an attractive exterior, impairs their value.

Patent Office Reports.

Ezra H. Dawes, of Litchfield, Me., for Devices of a Convertible Dung Fork:

I claim making the tines of ordinary dung or hay forks to revolve upon the handles, as set forth.

Wooster A. Flanders, of Sharon, Vermont, for Improvement in Bee Hives:

I do not confine myself to the peculiar construction described, but I claim the adjustable passage by which the entrance to the hive may be enlarged or diminished in the manner set forth.

John D. Filkins & W. H. De Puy, of Lima, In-

diana, for Improvement in Attaching Horses to Plows:

We claim the combination of the limber and stiff tongues with the running gear, to adapt it to being drawn by two teams abreast, as described.

Samuel Hutchinson, of Rockport, Ind., for Improvement in Cutting and Planting Potatoes:

I claim the construction and combination described of the cam, sliding platform, cutting blade and trap doors, with the furrowing share and covering blade, for cutting, dropping, distancing and covering potatoes.

David S. Mackey & J. R. Smith, of Batavia, N. Y., for Improvement in Winnowers:

We claim, first, the peculiar manner of operating the screen, viz., by means of the eccentrics placed in a reverse manner upon the shaft; said eccentrics working between the blocks attached to the under side of the screen, as described.

Second, we claim producing two blasts from a single fan, and having the two blasts cross or intersect each other, by which a blast passes horizontally over the top of the screen, and a blast also passes upward through the screen, preventing the screen from being clogged or choked by the chaff.

Wm. W. Richards, of Philadelphia, Pennsylvania, for Improvement in making Shovels, Spades, &c.

I claim as a new manufacture, shovels, spades, and other implements, made of a composite sheet of metal, whose constituents are parallel laminae of an unequal hardness, as set forth.

But I make no claim to such implements made of the hard laminae extending for a short distance only above the edge, but only where it extends up beneath the strap to support the back.

B. B. Sargent, of Sutton, New Haven, for Improvement in Expanding Horse Shoes:

I claim the combination of the bearers or ears, with the jointed quarters or bars, jointed together or to a common toe piece or cork, and operated by an expansion screw or contrivance, as specified.

J. T. Sargent, of Sutton, New Haven, for Improvement in Garden and other Hoes:

I do not claim the employment of a screw and nut for confining two things together; nor do I claim the attachment of the shank and blade of a hoe by means of the bearing plates welded to and forming part of the shank and rivetted to the blade.

But I claim my attachment of the blade and shank whereby the blade not only can be readily removed from or as readily confined to the shank, but when affixed to it is prevented from breakage where the greatest leverage or strain is brought upon it, meaning to claim the bearing head, fixed firmly to and making part of the shank the movable plate or stiffener, or its equivalents (applied to the back of the blade and made separate from the shank), the screw on the shank, the screw nut, and the recess in the hoe blade as combined together and with the shank of the handle and made to operate, as specified.

Albert Vose, of Pittsfield, Vt., for Improvement in Ox Yokes. Antedated Aug. 10, 1853:

I claim, first, the construction of the semi-revolving neck-blocks, each having a curved groove and pin fitting into it, for enabling the neck-block to always adjust itself at right angles to the direction of

the neck of the animal.

Second, I claim, in combination with the groove in the neck-block, the use of the pin subserving the double purpose of controlling the movement of the neck-block, and adjusting the length of the yoke, as described.

Wm. Wheeler, of West Poultney, Vt., (assignor to Charles H. Kellogg, of Troy, N. Y.,) for Improvement in Cutting the Bars and Teeth in Curry Combs:

I claim the method of forming the bars of curry combs by placing them out of plates, so that at a single operation a strip of the proper width for the bar is severed from the plate, and one row of teeth cut thereon, and another row upon the end of the plate for the next bar, as set forth.

N. C. Davis, of West Jefferson, Ohio, for Improvement in Seed Planters:

I claim the piston provided with a notch or hollow in its upper end, and so arranged in combination with the partition and depression, that it will bring up and discharge through the aperture, the desired number of grains of corn every time it is raised by the operator, as set forth.

John W. Cormack, of Quincy, Ill., for Improvement in Cane and Maize Cutters:

I claim the framing and manner of attaching the knife and arm to the sted.

C. P. Kelsey, of Livingstonville, New York, for Improvement in Grain Cradles:

I claim, first, the bar or its equivalent, for attaching the fingers of the frame to the snath, for the purpose set forth.

Second, I claim so connecting the braces with the fingers, by means of link or other universal joints, that the snath may be folded closed against the fingers, without requiring that the said braces should be loosened in the snath, as set forth.

John A. Taplin, of Fishkill, N. Y., for Improvement in Straw and Grain Separators:

I claim the vibrating straw carrier and grain separator, constructed as set forth with a screen and fluted bottom board, for the purpose of separating the grain from the straw, returning the former to the winnowing apparatus, and conveying the straw to the hinder extremity of the machine.

J. V. A. Wemple, of Chicago, Ill., for Improvement in Grain Separators:

I claim the employment of a cylinder, having tangential, or other suitably projecting plates across or along its periphery for the purpose of separating the grain and breaking the impinging effect produced by the threshing cylinder on the endless apron, the said cylinder being so situated and operating in fear of the threshing cylinder, as gently to feed over it the straw and headings, as they are delivered from the threshing cylinder.

Geo. Calvert, of Upperville, Va., for Improvement of Bee Hive:

I claim the combination of the honey boxes with another box and cross pieces, arranged and operated in the manner set forth.

Seneca Lapham, of Salem, Ohio, for Devices for Steering Cultivators:

I claim the combination and arrangement of the parts, consisting of the lever and its attachment to

the braces, and the connection of the tongue to the lever by the staple. This I claim in its application to the purpose of changing the direction of this and other machines as specified.

For Improvement of Opening and Closing Gates—
Wm. T. Merritt, of Hart's Village, N. Y.:

I claim elevating or depressing, or opening and closing the gate, as described, viz: by means of the shaft, having upon it the pulley F, the pulleys G G, being attached permanently to said shaft, and having ropes attached to them; and the pulleys F F, being placed loosely on the shaft and connected to it at a certain period by means of pins on the shaft, working in slots in the bosses or hubs of the pulleys, said pulleys having the chains attached to them and to the upper ends of the gate styles, the gate being prevented from being casually depressed by means of the pawl, which is freed from the notch in the boss or hub by the dog, substantially as set forth.

S. S. Allen, of Salem, N. J., for Improvement in Cutting Gear of Grain and Grass Harvesters:

I claim the arrangement by which the driving wheel is made the centre of oscillation in counter-balancing the cutter beam and cutters thereon, embracing the secondary wheel and spring, for the purposes set forth.

I also claim the combination of the tongue, with the driving wheel and the secondary wheel, for the purpose set forth.

I also claim the method of balancing the cutter blades on the angular bar, by the sliding bar, in combination with the blade, or their equivalents, for the purpose set forth.

Lastly, I claim the construction of the cutter blades as formed on the under side with a rasp or roughened surface, while the upper side forms a shear cutting edge for the purpose of preventing choking of the fingers and supplying an oil box to the cutter bar, as set forth.

John Blue, of Covert, N. Y., for Improvement in Carriers to Grain Separators:

I claim the arrangement of the cam blocks, or their equivalents, on the shaft, for agitating the endless apron, as set forth.

John Jones & Alexander Lyle, of Rochester, N. Y., for Improvement in Cutting Gear of Straw Cutters:

We do not claim the knives, heads, or flanges, which form a part of the heads separately. But we claim the combination of the knives and segments of flanges (which are attached to and form a part of the heads) the knives being placed on the inside of the flanges, instead of the outside, in the manner and for the purpose as described.

Samuel Karns, of Bloody Run, Pa., for Improvement in Fastening the Teeth to Clover Hulling Cylinders:

I claim the binding of the teeth to the hulling cylinder, by means of the wire band, as set forth.

Abraham Lash & M. Moore, of Belleville, Ohio, for Improvement in Screens of Winnowers:

We do not claim any form of any mill or shoe: but we claim the two fluted cleaners, or their equivalents, and the combination of said cleaners, as set forth. The same may be used in any common winnowing machine.

William H. Meriwether, of Comal county, Texas, for Improvement in Wire Fences:

I claim the employment of the undulating or zig-zag wire for fencing, substantially as described, which, by its elasticity, increases the durability and effectiveness of the fence, as specified.

A. B. Peterson, of Dexter, Mich., for Improvement in Grain Threshers and Separators:

I claim, first, the riddle, with swinging sections, as described, in combination with the interior carrier or elevator, to separate the grain from the straw, and discharge the grain on to the riddles under the head of the carrier or elevator, with the effect of permitting the cylinder and concave to be set low down, as set forth.

Second, the running of the riddle and carrier or elevator, on separate and independent pulleys, in the manner set forth.

Third, the introduction of the projecting apron between the carrier or elevator and riddle, to serve the double purpose of preventing the straw from driving through the riddle, and protecting the carrier or elevator, from abrasion by the grain, as set forth.

Fourth, hanging the riddles or the riddle, and wheat board, to upright standards, as described, to give the upper riddle the longest stroke.

W. D. Williams, of Raleigh, N. C., for Improvement in Wagon Brakes:

I do not claim a double crank attached to the iron hounds of the wagon, and connected to the brakes behind the wheels, for applying the power through the action of the horse, forward and backward.

I claim forming two swing or rolling joints between the front axle and the front hounds, in combination with the swinging brake, arranged on top the reach, and in front of the wheels, for the purpose of rendering the wagon more perfectly self-locking, or for applying the brakes simply by the aid of the horse and wagon, and disengaging them by the forward action of the former, the whole being as described.

I also claim making the brake capable of swinging on a center so that it may be thrown over toward the front of the reach, when it is desired to dump the load, and again thrown to its proper place, after dumping, as set forth.

Joel Wisner, of Aurora, N. Y., for Improvement in Washing Machines:

I do not claim the use of a horizontal circular rotary wash board in the bottom of the tub, when they are used with the ordinary radial flutings.

But I claim making the said wash board of a conical form, having its surface higher above the bottom of the tub, at the circumference than at the center, and attaching to it and to the bottom of the tub, radial ribs of the form of a half cone, when these ribs are formed of such depth, and with spaces so wide between them, as to receive the clothes in these spaces in such a manner as to turn or roll them over as the board is rotated back and forth, as described.

The late State Fair.

The executive Committee of the State Agricultural Society held a meeting at their office in Harrisburg, last week, when it was ascertained that the receipts at the exhibition held in Pittsburg amounted to \$17,200—deducting \$8,000 paid in premiums, and other expenses, a balance will be left of \$4000; which, added to the appropriation of \$2,000 by the State, and the sum in the Treasury and invested in stocks, will

For the Farm Journal.

reach the sum of \$15,000. It is contemplated by the officers of the Society, to use this sum for the purpose of establishing an Agricultural school, and application will be made to the Legislature for an act of incorporation for the purpose. It is believed by the officers of the Society, that an institution of this kind, established upon a proper basis, could be sustained by the resources of the Society.

Premiums for Field Crops.

The Committee of the State Agricultural Society have issued the following premiums for field crops:

For best 5 acres of Corn,	\$20
Best acre of Corn,	10
“ 5 acres of Wheat,	20
“ acre do,	10
“ 5 acres of Rye,	15
“ acre do,	8
“ 5 acres of Barley,	15
“ 5 acres of Oats,	15
“ acre of Timothy Seed,	5
“ acre of Clover do,	5
“ acre of Irish Potatoes,	15
“ half acre do,	10
“ acre of Carrots,	10
“ $\frac{1}{4}$ acre do,	5
“ $\frac{1}{4}$ acre of Ruta Baga,	10
“ $\frac{1}{4}$ acre Sugar Beets,	10
“ $\frac{1}{4}$ acre Mangel Wurtzel,	10
“ $\frac{1}{4}$ acre Turnips,	10
“ half acre of Tobacco,	5

They add:

Competitors for premiums for the above agricultural productions, must produce a full statement of the mode of cultivation, and accompany the same with the certificates of two respectable men as to the product and measurement of the ground, and also exhibit a sample of each crop at the Annual Meeting in Harrisburg, on the 3d Tuesday of January next, when these premiums will be awarded.

The entire crop produced on the ground surveyed must be measured in the bushel, and no premium will be awarded by the committee where a part of the crop is measured and the balance of one, or five acres, is estimated thereby. That is where a person contends for the best five acres, the whole crop grown on the five acres must be measured, and certified to, &c.

Samples of crops, with certificates of product and measurement of ground, should be sent to David Mumma, jr., at Harrisburg, before the first of January next, in order that the judges may have time to examine them before the Annual Meeting of the Society, when the premiums will be awarded. Grain and Root crops, samples should not be less than half a bushel; Seeds, not less than a pound; Tobacco, not less than five pounds.

Trying to farm without capital, is like trying to run a locomotive without fuel. Money and wood both must be consumed, if they are to move the machine of the farm or of the rail.

The true order of learning should be, first, what is necessary; second, what is useful; and third, what is ornamental. To reverse this arrangement, is like beginning to build at the top of the edifice.

The nerve which never relaxes, the eye which never blanches, the thought which never wanders—these are the masters of victory.

Shanghaiana.

In this great progressive age,
New fangled notions are the rage;
A mania's touched each branch of science,
Set law and reason at defiance.
Even farming, old and honor'd art,
Has seen its palmiest days depart;
The old routine no more is known,
The farmer now a chemist's gown,
And obtruse science, dark and mazy,
Has turned his head and set him crazy.
He speculates in improved stock,
While 'ere his purse will bear the shock;
And when at last he's lost his all,
The cause he sees of his downfall.
To stay him in his mad career,
And whisper caution in his ear,
I'll tell how I was *bankrupt* made,
By entering in the *Shanghai trade*.
Wife Betsy, if I may believe her,
At a show had caught *fowl fever*,
And soon, greatly to my surprise,
Became quite ravid on Shanghais;
And fearful lest she'd scold and pout,
I straightway went to pick some out.
The dealer showed us every kind,
And wife could scarce make up her mind,
'Twixt buff Shanghais and some still finer,
He called the Royal Cechin China:
And should of these, neither suit her,
He had a kind called Brahma Poetra.
She chose, and I, with many sighs,
Paid fifty dollars for Shanghais.
Months have elapsed, and mark the change,
Beyond my fancy's wildest range,
For now 'twould seem, misfortunes rife
Conspire to render *wretched* my life.
The other day wife Betsy said,
We would a pair of fowls behead;
She served them up, they were so tough,
Of Shanghais I seen had enough,
And wife's false teeth, that a week before
Had cost me sixty dollars or more,
She broke, and by this mishap cruel,
Poor Betsy had to live on gruel:
While I myself, in trying to chew
A piece, nearly broke my jaw in two.
Through sleepless hours, all night long,
Is heard their thundering Chinese gong,
Their constant crowing drives me mad,
And then their gluttony is as bad;
They've eat us out of house and hall,
(Bad as this is it is not all.)
My pigs are starving in their sties,
For want of meal, no cakes or pies
For months *we've* had, for not an egg
We get unless we buy or beg.
My suffering cows with look forlorn,
'Low for their 'customed food of corn;
And Debbin and his patient mate,
No longer show their wonted gait:
Their ribs plain seen, and staring coats,
Attest the want of corn and oats.
The corn crib's empty, grain bins clean,
The Shanghais have been *there* I ween;
My credit's gone, my debts unpaid,
My friends avoid me half afraid,
And to conclude my mournful tale,
My farm is up at "sheriff's sale."

BY THE DOCTOR OF COW HOLLOW.

END OF VOLUME III.







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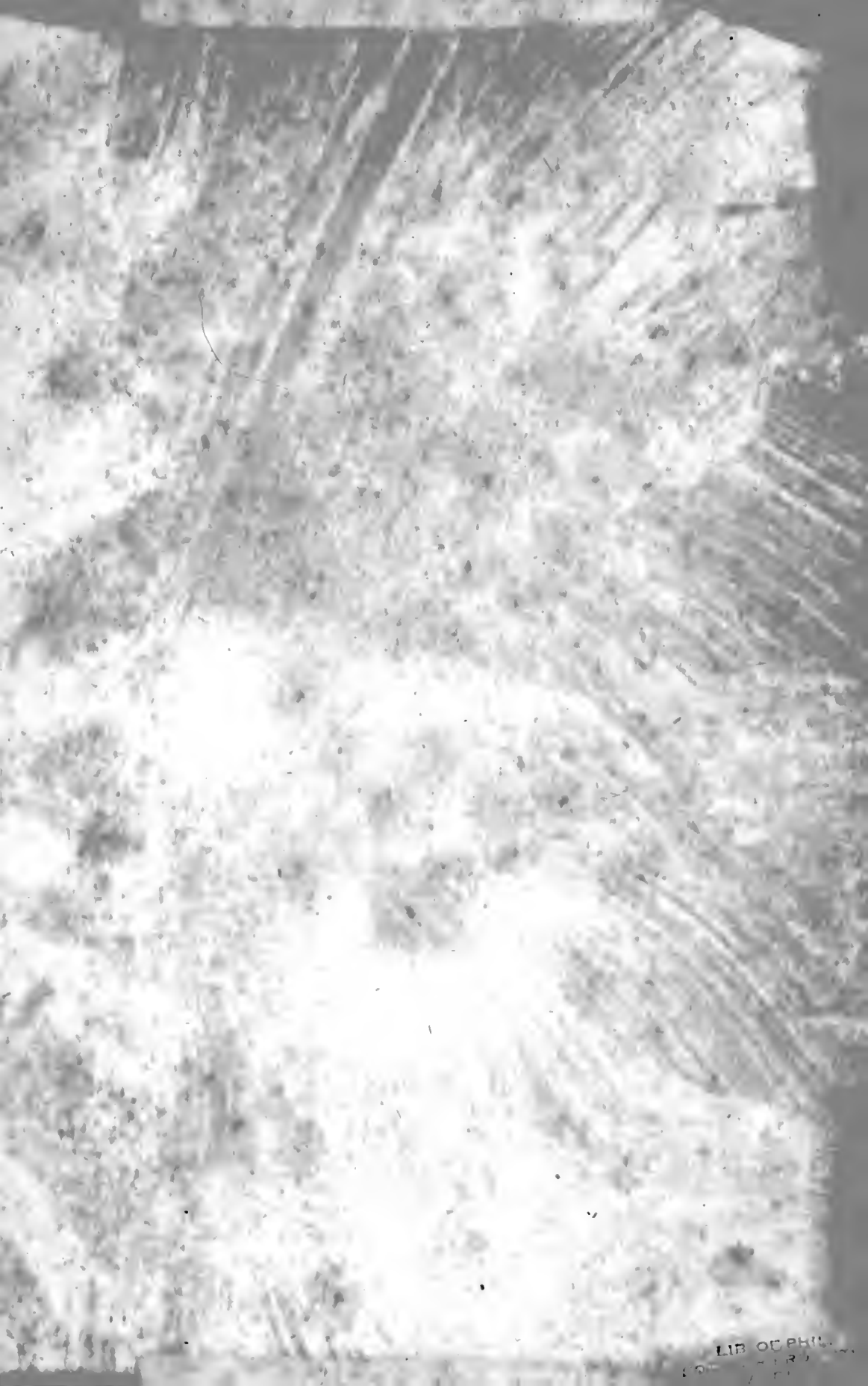
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